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Training, Education and Victory on the Battlefield

If the battle of Waterloo was won on the playing fields of Eton, then certainly, triumph in the Gulf War—at least as far as the Army is concerned—was forged in the sand of the by National Training Center (NTC) and the mud of Hohenfels; the seminar rooms of Fort 1232 1 but 10 Leavenworth and Carlisle Barracks; and the training fields of Fort Benning, Fort Knox Availabilis and the rest. Even though the Army finds itself in a period of monumental internal and external change, "the training of soldiers, leaders and units to win in combat will remain the Army's single most important task." These words, from the Fiscal Year 1993 Posture Statement, echo the lesson that was taught to the world in the Gulf—that size alone does not make an army. The pathway to success on the battlefield lies in the excellence of that army's training.

Military Review is pleased to lead off a subset of articles on training/education in this issue with an update on Joint Professional Military Education (IPME) by Congressman Ike Skelton of Missouri, chairman of the House Armed Services Committee's Panel on Military Education. Commissioned in November of 1987, the panel held its first hearings less than a month later. Part of its charter was to "review Department of Defense plans for implementing the [JPME] requirements of the Goldwater-Nichols Act, with a view toward assuring that this education provides the proper linkage between the Service-competent officer and the competent joint officer." In his article, Skelton reviews the progress toward "jointness" in officer education but implies that for all the successes, there are still challenges ahead.

Next, Retired Lieutenant Color els Robert J. Schneider and Faris R. Kirkland's perspective on "Training Lieutenants" is followed by a review of simulation support provided to the NTC rotation of the 48th Infantry Division by Lieutenant Colonel Bruce A. Olson and Major Lonnie E. Nesrsta.

Within the last few years, risk assessment and management have assumed appropriately greater emphasis in the engineering of training programs and field exercises. Retired Brigadier General Clyde A. Hennies, former commander of the US Army Safety Center, and Paul A. Dierberger, chief of the center's training division, point out that training safely in peacetime does not necessarily translate to the same level of safety awareness during combat operations. They argue that the corollary of battle-focused training is not a garrison-based but rather a battle-focused safety program. A reorientation, they say, is necessary. The result will be a saving of precious resources of life and equipment for the real battle.

We round out this issue with a range of articles, but I want to close this introduction with a few words about our upcoming issues. We plan to publish the winning entries of Military Review's 1991 writing contest in the July issue and the winners of the 1992 writing contest in November. Over the next few months, Military Review will be publishing articles on simulation (June), leadership (August), the Reserve Components (September), corps and division operations (October) and joint and combined warfare (November). We usually finalize the lineup of articles based on a particular theme about two months prior to the publication month. But, aside from planned themes, there are subjects that are always of interest, and we routinely hold space for such "wild card" articles. For the summer and fall issues, the field is still open. Topics for possible articles include technology, military history, contingency operations, deep operations, Total Quality Management, leadership, command, low-intensity conflict, logistics, terrorism, etcetera, etcetera, etcetera. If you have ever entertained the thought of writing an article for Military Review, get off your duff and do it. If you do not have time to write an article, send us a letter, drop us a comment card, tell us what you think is important to this Army of ours. After all, it is our Army.

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JEME Are We There Yet?

Congressman Ike Skelton

The Panel on Military Education of the Committee on Armed Services of the House of Representatives published its report just over three years ago. The author, the chairman of that panel, provides his observations on the implementation of the panel's recommendations for a two-phase joint professional military education process. He offers a situation update on the progress made since the report was made. He reviews the military education of the 1930s and the 1990s and compares the services of both eras. And, finally, he expresses his views on establishing a joint school of advanced military studies to be a follow-on school to the current



N LATE 1987, the Panel on Military Education of the House Armed Services Committee began its review of joint education at the command and general staff colleges of the four services. We issued our preliminary recommendations in November 1988 and our final 206–page report in April 1989.

The panel recommended the establishment of a two-phase joint specialty officer (JSO) education process as part of a wide-ranging series of recommendations concerning intermediate and advanced professional military education.

The panel recommended that Phase I be provided to all students attending a service intermediate college. We made this recommendation because we strongly believed that officers of all four services at the major/lieutenant commander and lieutenant colonel/commander ranks should have an understanding, if not expertise, in multiservice matters—"jointness." Familiarity with doctrine, organizational concepts, and command and control of the forces of each of the four services was to be included in the curriculum of all four service intermediate schools. In addition, the students would be introduced to the joint world—the joint planning processes, joint systems and the role played by service commands in the unified command structure.

We recommended that Phase II, the detailed, in-depth course of study in the integrated deployment and employment of multiservice forces, be accomplished at the Armed Forces Staff College (AFSC), Norfolk, Virginia. The idea was that only the small percentage of intermediate school graduates en route to assignments as joint specialists would attend the AFSC. They would build on the knowledge they had gained during the Phase I course of study.

I am pleased to report that this key recommendation of our panel, the establishment of a two-phase JSO education process was enacted by the Department of Defense. As proof, some of those now attending the course of study at the US Army Command and General Staff College (USACGSC), Fort Leavenworth, Kansas, or at another service's staff college will, upon graduation, proceed to Norfolk to attend the AFSC.

Service Expertise First

The Goldwater–Nichols Department of Defense Reorganization Act of 1986 did much to promote the concept of jointness among the four services. Likewise, our panel's efforts have gone far in promoting jointness in the area of professional military education. We realized that one

Our panel report listed
the attributes of the JSO—a thorough
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experience operating with other services,
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Ultimately, a JSO must "understand the
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of the ways to promote better joint planning and joint operations was through professional military education and the development of the JSO. (The other important tool for improving joint operations is for the services to sponsor more joint training exercises.)

However, we also recognized that the successful JSO first had to be an expert concerning his respective service. While each of the four intermediate service schools now has a role in promoting joint education, each one still has the primary function of educating officers to become competent in their respective warfare specialties. The USACGSC, for example, must provide Army officers a firm foundation on the merging of separate Army branch elements into integrated Army combined arms forces that can conduct land warfare with the support of air and naval forces. This is to be done at the operational level

An Army officer must thoroughly understand the capabilities, characteristics, strengths and weaknesses of Army forces. He or she must have a very good understanding of the integration of combat, combat support and combat service support elements employed in the conduct of successful Army operations.

The opening shots fired during the commencement of the air campaign during Operation *Desert Storm* were fired by Army Apache

The recent war in the Persian Gulf exhibited elements of campaigns fought in previous wars.... Schwarzkopf's familiarity with those campaigns, through his study of military history, helped him design the strategy that resulted in the overwhelming victory won by the allied coalition over Iraq.

attack helicopters. Their mission succeeded in destroying a number of Iraqi early warning radar sites. The success of the mission allowed coalition aircraft to surprise the Iraqi air defense forces on the first night of the war. This was crucial in allowing the coalition air forces to gain air supremacy. Their losses that first night over Iraq were zero.

The story behind the story was one of interservice cooperation. While the Army possessed the attack helicopters that took out the radar sites with laser-guided Hellfire missiles, it was US Air Force special operations aircraft, MH-531 Pave Low enhanced configuration helicopters that acted as pathfinders for the Army choppers. As General H. Norman Schwarzkopf sought recommendations from his staff, Army officers needed to understand the navigational limitations of the AH-64 Apache. On the other hand, Air Force officers on the commander in chief (CINC)'s staff needed to know that Air Force special operations Pave Low helicopters could provide the navigational guidance lacking in the Army attack helicopters.

This example illustrates the requirement for JSOs on joint staffs to be experts on their respective services. An Army infantry JSO would have needed to understand the capabilities and, more specifically, the navigational limitations of Army AH–64s. Similarly, an Air Force fight-

er pilot JSO would have needed to know that the Air Force had in its inventory not only fixed—wing aircraft but also Pave Low special operations helicopters able to help the Army AH–64s overcome their navigational limitations for the crucial mission against the Iraqi early warning radars.

Jointness and Joint Education at the Command and Staff Colleges

Our panel report listed the attributes of the JSO—a thorough knowledge of his or her own service, some knowledge of the other services, experience operating with other services, trust and confidence in other services and the perspective to see the "joint" picture. Ultimately, a JSO must "understand the capabilities and limitations, doctrine and culture of the other services."²

Joint education at the command and staff colleges of the four services has come a long way since our panel began its work. Last year, we held hearings to assess the progress made by the various intermediate— and senior—level schools to implement the recommendations we had made.

Prior to the hearings, we asked the General Accounting Office (GAO) to assess the implementation of these various recommendations. The GAO report on the two Army schools (USACGSC and the US Army War College) came out in March 1991. It noted that the USACGSC had implemented or partially implemented 29 of 31 recommendations.³ The next month, the panel had the opportunity to hear Major General John E. Miller, the deputy commandant of the USACGSC, discuss the progress made on implementing our panel's recommendations two years earlier.

CGSC Situation Report

The story on joint education at intermediate-level military educational institutions is a positive one, not simply for the Army but for all the services. Each has in place a Phase I course. At Fort Leavenworth, the effort has been one to include the Phase I material throughout the six blocks of instruction. I have had the opportunity

to examine the curriculum from the previous academic year and can see the amount of time devoted to joint matters. My instincts tell me that the balance of instruction between landforce capabilities and joint capabilities is about right. And I believe that it is done in the proper fashion—more Army–specific courses in the early part of the curriculum, with greater attention to joint issues toward the end of the course.

It would be interesting to hear from both faculty and students whether they also believe the balance between Army and joint matters is just about right. I am sure if there are concerns about this issue, that letters touching on the subject will appear in future issues of *Military Review*. Those who would want to write me directly are encouraged to do so.

Another positive development at Fort Leavenworth concerns the increased number of sister service students attending USACGSC. Both the Air Force and the Navy have increased the number of students at the school. This academic year, the Air Force total was scheduled to reach the 80–student mark. This coming fall, the naval services will also reach the 80–student mark (60 Navy and 20 Marine).

The Navy has been able to improve both the number and quality of students at Fort Leavenworth because of our panel's efforts to have the Navy provide more line officers to other service intermediate and senior schools. This was a cooperative endeavor on the part of both our panel and the Navy. I believe that we have been successful. This means that there should be a greater number of Navy officers in the seminar groups that meet throughout the year at USACGSC.

Four years ago, not every seminar had a naval officer. Others that did, had officers who were either lawyers, supply officers or others who would never command a ship, a submarine, an aviation squadron or some larger combat formation.

Student/Faculty Mix. Yet, our panel was somewhat disappointed that its recommendations for student and faculty mix of officers from the three military departments were not followed. The first recommendation called for in-



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Jackson's successful Shenandoah Valley
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termediate service schools to have student body mixes of two officers from each of the two non-host military departments in every student seminar. This was to be achieved by academic year 1995–1996. So, at Fort Leavenworth, that would mean that in each seminar there would be two Air Force officers and two Navy officers (or one Navy officer and one Marine officer).⁴

Our faculty mix recommendation at the intermediate level called for 80 percent from the host school and 10 percent from each nonhost school military department. We called for its implementation by academic year 1990–1991. By academic year 1995–1996, the comparable figures were to have been 70 percent and 15 percent

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the Marine Corps took advantage of a
difficult situation by sending their best officers to various [staff] schools—to study,
to teach and to prepare for the future.

from the other two military departments.⁵

In both the student and faculty mixes, the recommendations of our panel were relaxed by the Military Education Policy Document (MEPD) issued under the guidance of the chairman of the Joint Chiefs of Staff in May 1990. The MEPD sets guidance in the area of joint education. While its recommendations set the minimum levels in the matter of both student and faculty mixes, the USACGSC viewed those minimum levels not as floors but as ceilings. While the situation of student and faculty mixes is better today than it was four years ago, it is not as good as our panel believes it could be.

Study of Military History. Another area that our panel report stressed was the study of military history, especially in helping to develop strategists. In our visit to Fort Leavenworth in 1988, the study of military history was confined to 51 hours and limited to the American experience of war in the 20th century. Army officers, especially those who will rise to command at the corps or theater level, need a thorough understanding of military history that reaches back over the ages.

The recent war in the Persian Gulf exhibited elements of campaigns fought in previous wars. I am confident that Schwarzkopf's familiarity with those campaigns, through his study of military history, helped him design the strategy that resulted in the overwhelming victory won by the allied coalition over Iraq. The lessons for him to draw upon could be found in military actions spanning more than a century.

The six-week air campaign allowed American and coalition aircraft to pound away at Iraqi installations and forces so that when the ground campaign finally went forward, resistance was comparatively light. Maybe the World War II Battle of Tarawa acted as a cautionary tale about halting a bombing campaign too early. During that amphibious landing, Marine forces suffered heavy casualties because the island had not been hit hard enough with air and naval gunfire. ⁶

The placement of Army and Marine forces along the border between Saudi Arabia and Kuwait was reminiscent of Sir Bernard L. Montgomery's North African Campaign, which used deception to defeat the German Afrika Korps at El Alamein. And, finally, the famous "left hook" that struck with such force and surprise against the right flank of the Iraqi ground forces may have derived its inspiration from our own Civil War. At the battle of Chancellorsville, General Robert E. Lee, too, dispatched forces under General Thomas "Stonewall" Jackson around the right flank of General Joseph Hooker's Union troops and routed them in a manner that was daring and aggressive.

These examples of how history may have been used in *Desert Storm* simply underscore the point that a profound understanding of military history is crucial for any officer attending the US Army Command and General Staff Officer Course (USACGSOC) at Fort Leavenworth. Since our panel visit in early 1988, the USACGSOC has broadened its study of military history to include 18th century warfare. The seeds of future American military victories can be found by plowing deeply the fertile soil of military history.

Military Education in the 1930s

During the Great Depression of the 1930s, in a far harsher budgetary climate than that of today, all of the services found themselves reduced to "pauperdom." The sizes of the forces were drastically cut, and modernization programs were, at first, postponed and then cancelled. The Army, which during the Great War had numbered more than 2.3 million, was reduced to less than 138,000 by 1934. In a crisis.

the Army could have fielded 1,000 tanks, all obsolete; 1,509 aircraft, the fastest of which could fly 234 miles per hour; and a single mechanized regiment, organized at Fort Knox, Kentucky, led by horse–mounted cavalrymen who wore mustard gas–proof boots. The United States had the 16th largest army in the world, with Czechoslovakia, Turkey, Spain, Romania and Poland possessing larger armies.

Too poor to train and equip their forces, the Army, the Navy and the Marine Corps took advantage of a difficult situation by sending their best officers to various schools—to study, to teach and to prepare for the future. The Infantry School at Fort Benning, Georgia, the Command and General Staff School at Fort Leavenworth, Kansas, the Naval War College at Newport, Rhode Island, the Army War College in Washington D.C. and the Marine Corps schools at Quantico, Virginia, experienced a renaissance.

It was during the interwar years, the "golden age" of American military education, that such renowned World War II military leaders as George C. Marshall, Dwight D. Eisenhower, Joseph Stilwell, Omar N. Bradley, Chester W. Nimitz, Raymond Spruance and Henry "Hap" Arnold benefited from study at intermediate—or senior—level war colleges. William F. "Bull" Halsey Jr., who commanded the Central Pacific amphibious campaign against the Japanese during World War II, attended both the Army and Navy War colleges. Marshall taught at the Army War College and was the assistant commandant of the Army Infantry School.

During this same period, the Marine Corps devoted considerable effort at Quantico, its seat of learning, putting together the doctrine of amphibious warfare used to such telling effect, from Guadalcanal to Okinawa, in the Pacific campaigns of World War II. The naval—oriented Fleet Marine Forces became the spearhead of the Navy's Orange Plan, the basic outline for executing a war against Japan, which was adopted in 1926! The best summation for the period was made by Nimitz, who noted that the entire Pacific Campaign had been thought out and fought in the classrooms of the Naval War College dur-

ing the 1930s. The only unforeseen event was the use of the kamikaze suicide aircraft attacks on US Navy warships during the latter stages of the Pacific war. In short, we won the victories of the 1940s in the command and staff and war college classrooms of the 1920s and 1930s.

Military Education in the 1990s

Shifting from the recent past to the more uncertain future. I want to touch on the important task of educating our country's military leaders. present and future. A first-rate officer education program—from lieutenant to general—will prepare today's military officers for tomorrow's challenges by providing them the most important foundation for any leader—a genuine appreciation of history. I cannot stress this enough because a solid foundation in history gives perspective to the problems of the present. And a solid appreciation of history provided by such a program will prepare today's military officers for the future, especially those who decide to spend 30 years in one of the services. They will become this country's future strategists.

In the March 1989 issue of *Parameters*, the US Army War College quarterly, General John R. Galvin, supreme allied commander, Europe, describes why our country needs strategists in each of the services and at all levels. "We need senior generals and admirals who can provide solid military advice to our political leadership," he writes, "and we need young officers who can provide solid military advice—options, details, the results of analysis—to the generals and admirals." He lists three elements in an agenda for action:

- Formal schooling.
- In–unit education and experience.
- Self–development.¹⁰

In brief, the military student should learn the historical links of leadership and be well versed in history's pivotal battles and how the great captains won those battles. Successful military leaders of yesteryear were indebted to their military predecessors. Jackson's successful Shenandoah Valley Campaign resulted from his study of Napoleon's tactics, and Napoleon, who studied Frederick the Great, once remarked that he

thought like Frederick. Alexander the Great's army provided lessons for Frederick, 2,000 years before Frederick's time. The Athenian general, Miltiades the "Younger," who won the Battle of Marathon in 490 B.C., provided the inspiration that also won the Battle of El Alamein in 1942; the Macedonian, Alexander the Great, who defeated the Persians at the Battle of Arbela in 331 B.C., set the example for the Roman victory at Pydna 155 years later. The English bowmen who won Crécy in 1346 also won Waterloo in 1815; Alexander A. Vandegrift, Bradley, Montgomery, or Douglas MacArthur, who won battles in the 1940s, might well win battles a century or so hence. Thus, I believe that every truly great commander has linked himself to the collective experience of earlier generals by reading, studying and having an appreciation of history.

A military career includes a lifelong commitment to self-development. It is a process of education, study, reading and thinking that should continue throughout an entire military career. Yes, tactical proficiency is very important, but so too is strategic vision. That can only come after years of careful reading, study, reflection and experience. Those at the USACGSC who finish their course of study should be aware of the natural yardstick of 4,000 years of recorded history. Thucydides, Plutarch, Sun Tzu, Carl von Clausewitz, Napoleon, Alfred T. Mahan and Sir Halford John Mackinder have much to offer those who will become tomorrow's future generals and admirals. Today's officer corps must be made aware of this inheritance.

Winston Churchill put this idea in these words, "Professional attainment, based upon prolonged study, and collective study at colleges, rank by rank, and age by age... those are the title reeds of the commanders of the future armies, and the secret of future victories."

A Joint School of Advanced Military Studies

As I survey the past four years, I see much progress that has been made in fostering joint education at the four intermediate service schools and at the AFSC. The recent publication of Joint

Publication 1, *Joint Warfare of the US Armed Forces*, underscores the efforts of the services to promote jointness. ¹² In many ways, our panel's work simply reinforced and accelerated trends that had already been underway in the services.

Professional military education is an important element in the development of tomorrow's senior military leadership. The Army established its School of Advanced Military Studies (SAMS) in 1983 to provide the Army with officers specially educated for military operations. It is expected that the graduates of this one-year. follow-on course of the intermediate command and general staff course will become the commanders and general staff officers of the Army. Cross-pollination has worked to the extent that both the Marine Corps and the Air Force have established equivalent courses (the School of Advanced Warfighting for the Marine Corps and the School of Advanced Airpower Studies for the Air Force).

One idea that merits serious study is the establishment of a Joint SAMS course under the auspices of the AFSC. It would be similar to the follow—on schools at Fort Leavenworth, Quantico and Maxwell Air Force Base, Alabama, but would have a joint focus. Such a school would seek applicants from graduates of the four command and staff colleges.

The details of such a course need to be worked out. Here are some suggestions. The student body should initially be composed of 60 officers, 20 from each military department. They may even be AFSC graduates who stay on for further study. Such a school would allow the chairman of the Joint Chiefs of Staff and the unified commanders to have a pool of officers well grounded in the planning and conduct of joint operations. It would be a course of study that would be added to rather than supplant the current second—year courses found at Fort Leavenworth, Quantico and Maxwell. One advantage of such a course would be to have Navy participation.

In 1923, Major George C. Marshall, the future World War II Army chief of staff, described the regular cycle in the doing and undoing of measures for the national defense. He observed that

"we start in the making of adequate provisions and then turn abruptly in the opposite direction and abolish what has just been done."13 Today. we are in the midst of making one of those changes in direction.

World conditions have changed, the Cold War is over. The challenge now is to reduce the size of our military effort without putting at risk our national security. There are still threats to American interests in the world that cannot be ignored.

While Americans want a reduction in military spending, they do not want to reduce spending in such drastic fashion that we risk undoing all the hard work and money spent since 1980 in restoring the military. Americans also understand George Washington's wise counsel, "To be prepared for war is one of the most effectual means of preserving peace."14 I am convinced that they will support measures needed to maintain an adequate and credible national defense in order to preserve the peace that we enjoy today.

But these next few years for those in the military will be difficult ones nonetheless. As we reduce the size of the services, professional military education should not be forced to take its "fair share" of the cuts. The fact is that smaller forces will have to be more capable forces. That means continued high levels of training and efforts to improve professional military education. Doing business in a joint fashion will become even more necessary.

Eisenhower got it right more than 30 years ago, when in a message to Congress, he noted, "Separate ground, sea, and air warfare is gone forever.

The Army established SAMS... to provide the Army with officers specially educated for military operations. It is expected that the graduates of this one-vear, follow-on course of the intermediate command and general staff course will become the commanders and general staff officers of the Army. . . . One idea that merits serious study is the establishment of a Joint SAMS course under the auspices of the AFSC... [available to] graduates of the four command and staff colleges.

If ever again we should be involved in war, we will fight it in all elements, with all Services, as one single concentrated effort. Peacetime preparation and organizational activity must conform to this fact." ¹⁵ Building on the accomplishments of the past few years, the enactment of the Goldwater-Nichols Act in 1986 and the greater effort in both service and joint professional military education will allow us to have a greater chance for securing a lasting peace. **MR**

NOTES

Missouri Congressman Ike Skelton is charman of the Panel on Military Education, House Armed Services Committee: a member of the Subcommittee on Military Personnel and Compensation; Subcommittee on Procurement and Military Nuclear Systems; and various other committees of the US House of Representatives, Washington, D.C. He has served as prosecuting attorney of Lafayette County, Missoun; as special assistant attorney general; and as a Missouri state senator.

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TRAINING TRAINING LIEUTENANTS

Lieutenant Colonel Robert J. Schneider, US Army, Retired, and Lieutenant Colonel Faris R. Kirkland, US Army, Retired

The question of who is responsible for training lieutenants has been around for a long time. The authors review the historical roles and training of lieutenants in the US Army and consider relevant research findings from the past decade. They speculate on how the Army might better prepare lieutenants and more quickly integrate them into the units they might be leading into combat.

HERE has never been agreement on the role of lieutenants in the US Army. Today, the most common perception is that "the platoon sergeant is in charge of the platoon in garrison; the lieutenant is in charge in the field." Several company commanders have voiced opinions typified by the comment: "I could command better without the lieutenants. I do everything through the platoon sergeants anyway." Many sergeants believe that "the first sergeant runs the company through the NCOs [noncommissioned officers]. The officers are just transients."

Beyond a general agreement that there should be one or more commissioned officers in a company other than the captain, the role, duties and instruction of lieutenants were left to the discretion of the company commander. The lieutenant was in the company to learn, to assist the captain and to take the commander's place if he became a casualty or was otherwise absent. But what skills he should have; how he should get them; what responsibilities he should shoulder; and how he should be evaluated are points that have remained vague throughout the history of the US Army.

During the 1980s, while conducting research on a wide range of human dimensions in the Army, research teams from the Walter Reed Army Institute of Research, Washington, D. C. frequently encountered lieutenants who did not know what was expected of them; what resources were available to them; and who per-

The views expressed in this article are those of the author and do not purport to reflect the position of the Department of the Army, the Department of Defense or any other government office or agency.—Editor

ceived themselves to be unwelcome appendages to an organization run by NCOs and more senior officers. The research teams heard complaints about lieutenants from soldiers in all ranks from private to general. The common thread uniting opinions expressed by leaders was that lieutenants were "problems" they would rather not have to address.

Soldiers with a sense of history will remember that during most of the Korean conflict and the Vietnam War, there were very few long-service NCOs in line units.² After the first year, most of the experienced sergeants were either casualties, had won commissions, filled key staff or training roles in an expanded army or had left the service. The lieutenants ran the platoons.³ Many of the lieutenants leading platoons in the 1990s feel they are not prepared for their roles and are not well-integrated members of their units. Such leaders are likely to be marginally effective in any operation involving decentralized operations or in the early stages of a fast-breaking conflict or military intervention.⁴

Historical Background

In the first regulation written for the American Army, Major General Friedrich W. A. von Steuben advised the lieutenaut to:

"Endeavor to gain the love of his men, by his attention to everything that may contribute to their health and convenience. He should often visit them at different hours; inspect into their manner of living; see that their provisions are good and well cooked. . . . He should pay attention to their complaints and when well founded endeavor to get them addressed." 5

Throughout the 19th century most infantry companies had an authorized strength of three officers and 65 men. They were organized with nine NCOs and specialists in company head-quarters and four squads of 12 privates, each led by a sergeant and a corporal. The squad leaders reported to either the first or second lieutenant. The lieutenants' duties toward their men were concerned with order and cleanliness. The Regulations of 1841 specified that lieutenants "... must be considered as under instruction in order

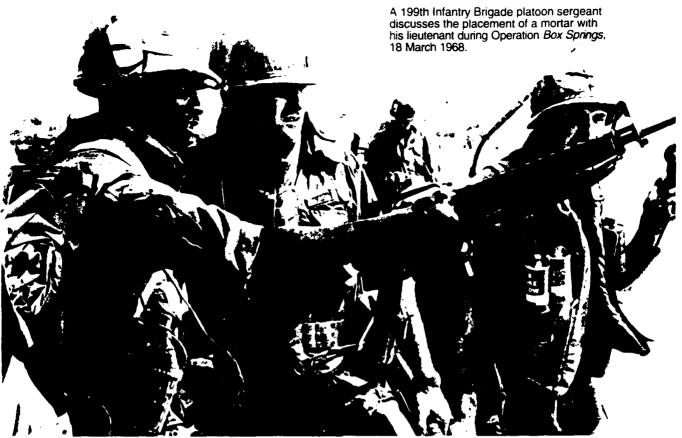
to qualify them for command," and that they should assist the commander in the preparation of reports and returns. Paperwork was then, as now, a primary concern of the military hierarchy. In 1841, it included accounting for funds, food, horses, firewood, soldiers, and so on. There were

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more than 250 forms required by the quartermaster, commissary and adjutant general departments. A lieutenant's duties occupied less than half of his day, and he spent much of his time in sports, hunting, riding or exploring. The 30 first and second lieutenants in a regiment spent an average of 15 years in those grades.

The notion that lieutenants should be trained professionally first emerged with the founding of the School of Application for Cavalry and Infantry in 1881 at Fort Leavenworth, Kansas. One lieutenant from each regiment was to attend each year. It was not until 1889 that the General Regulations prescribed that "... the regimental commander will thoroughly test the proficiency of both officers and enlisted men in practical and theoretical knowledge." By 1890, officers were required to pass proficiency examinations for promotion to first lieutenant, captain and major. 11 Shortly thereafter General John McAllister Schofield required post commanders to conduct post lyceums—seminars in which junior officers prepared and presented lectures on military topics to the officers on the post. However, most commanders and their subordinates apparently treated the lyceums as a farce. 12

At the beginning of the 20th century, though the position of the lieutenant was still unclear, there was agreement that he needed active guidance and development: "The captain should



Soldiers with a sense of history will remember that during most of the Korean conflict and the Vietnam War, there were very few long-service NCOs in line units. After the first year, most of the experienced sergeants were either casualties, had won commissions, filled key staff or training roles in an expanded army or had left the service. The lieutenants ran the platoons.

give the lieutenant lots to do." He was to make out the ration returns, muster and payrolls, requisitions, reports and estimates; he was to inspect quarters, drill the company and instruct NCOs. Efficient execution of these duties required broad knowledge and skills of the lieutenant, although there were still no formal arrangements to train him. In 1911 Captain James A. Moss observed:

"When the captain does all the work himself, he robs the lieutenant of initiative, makes him feel like a nonentity, prevents him from getting a practical, working knowledge of company administration, makes him feel he is not a part of the company." 14

World War I brought the reorganization of the company from a 65-man unit, under the direct command of the captain, into a unit of more than 200 men, divided into four platoons. Command of platoons provided lieutenants with an

unequivocal function. In addition to training and leading their units, they were to:

"Keep in as close touch as possible with the men under their command and . . . strive to build up such relations of confidence and sympathy as will insure the free approach of their men to them for counsel and assistance. These relationships may be gained and maintained without relaxation of the bonds of discipline and with great credit to the service as a whole." ¹⁵

Following the war, each branch organized a basic officer's course, which included bookkeeping. ¹⁶ Captains were advised to allow lieutenants to participate in the government and administration of the company without pestering them or hampering them with unnecessary instructions. ¹⁷ Moss, in the 1929 edition of the Officer's Manual, urged that the lieutenant "[b]e given large liberties in the training and handling of his platoon."



Lieutenants came into their own during World War II. They were the officers in whom: "... reposed the immediate and close command of men—they lead the attack personally." They were the representatives of the government whom the troops saw. Missions were executed because the lieutenants were there and saw to it. As the war continued, the "importance of ... platoon leaders... [who could] act promptly and aggressively when separated from their main forces or on independent missions ..." was recognized as crucial to success in combat.

As the likelihood of a second major war grew, the peacetime role of lieutenants began to assume a definitive form. They were to train their platoons, perform administrative tasks and prepare to command. Demands for a rapidly expanding Army no longer provided the luxury of years to train them. The life of a lieutenant became one of constant study and hard work. Finally, just before World War II began, the duty of the company commander to train his lieutenants was made explicit. ¹⁹ The commander was not to put his lieutenant in fear; if he was conscientious and thorough, his commander should make him feel appreciated and secure. ²⁰

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To be successful in accomplishing their missions and preserving the lives of their men, lieutenants had to know a great deal about weapons, tactics, maintenance, sanitation and health care, to name a few topics. ²³ To have his men follow him, the lieutenant had to demonstrate his competence, commitment to his men's welfare, accessibility and common sense in reaching and carrying through decisions. ²⁴ The confusion and uncertainty of combat "... provoke[d] feelings

of helplessness.... Men turn[ed] to their officer for leadership. The men expected...authoritative direction... from their officers." However, the importance of technical know-how, the short time most lieutenants had to learn it and

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the uneven socialization in their leadership roles led to a great deal of counterproductive interpersonal behavior by many officers. ²⁶ Unfortunately, the wise counsel to "make the lieutenant feel appreciated and secure" had disappeared from Army directives and guides by 1946.

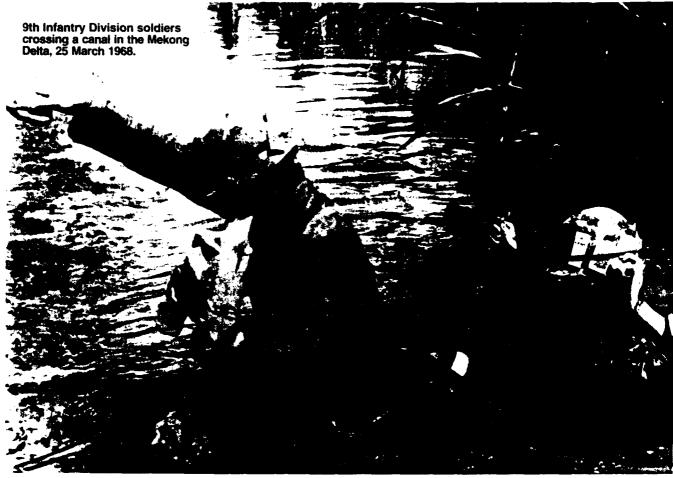
The postwar officer corps was five times as large as it had been in 1939, and by 1950, a substantial number of its officers were perceived by their superiors as "unfit for command of troops." Many failed during the early weeks of the Korean War. Nonetheless, lieutenants were the most important combat leaders in Korea. Most of the action from the spring of 1951 to the summer of 1953 consisted of platoon or company-size patrols and defense of, or attack on, small terrain features. Further, because a high proportion of the experienced NCOs had finished their tours in Korea by the middle of 1952, lieutenants became the primary sources of combat knowledge. ²⁸

Research during the decade between the Korean conflict and the Vietnam War revealed that the platoon leader's behavior with respect to his troops was important to his success as a leader and to the effectiveness of his unit. ²⁹ Lieutenants

needed, in addition to technical competence to inspire their subordinates' confidence, a repertory of interpersonal skills. These included counseling, communicating, motivating, leading soldiers with limited education and verbal skills and collaborating with their older and more experienced NCO subordinates. Responsibility and technical demands increased. Longer time—ingrade requirements for promotion might have given officers time to learn the fundamentals of their branches, but the requirements were shortened to meet the need for officers in higher ranks. Further, officers' basic courses were reduced in length from four to two months in 1960–1961, and to five weeks in 1968–1969.

Vietnam was a lieutenant's war to an even greater extent than the Korean conflict because the jungle routinely forced platoons to operate autonomously even when they were part of company operations. Training platoon leaders was a problem because company commanders were either lieutenants with less than two years of commissioned service or captains with just over two years. Once again, after the first two years, experienced NCOs were rarely available at platoon level. Senior officers, cognizant of how green the lieutenants who actually fought the enemy were, substituted close supervision during combat for training prior to combat. 33

During the latter stages of the Vietnam War, the US Army War College conducted studies of leadership and professionalism in the officer corps. The study on leadership found that in 1970, enlisted soldiers expected, but did not find, their leaders to be professionally competent, to work them hard at challenging and meaningful tasks, to be fair and honest, to punish slackers and violators of orders, to attend to their men's welfare and to respect their individual dignity. These expectations were not new; neither was it new that many officers did not meet them. A new finding was that the officers did not realize they were deficient. The study found second lieutenants were particularly weak in professional competence, knowing and respecting subordinates, communicating what they wanted their men to do and setting the example. 34



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Of perhaps greater importance for the training of lieutenants was the defective climate of professionalism reported by a second War College study. A principal finding was that junior officers, while not questioning "the traditional, essentially authoritarian mode of the military organization, or the risk of life . . . were frustrated by the pressure of the system, disheartened by seniors who sacrificed integrity on the altar of personal success, and impatient with what they perceived as preoccupation with insignificant statistics." 35

The Study on Military Professionalism indicated that the commander was typically "... marginally skilled in the performance of his duties" and "... too busy to talk or listen to his subordinates." As a survival strategy, many lieutenants adopted the values of their superiors. Others, dismayed by what they saw, left the Army. ³⁷

Recent Developments

During the late 1970s and 1980s, measures were instituted to strengthen the preparation of lieutenants and the climate in which they learn to be leaders. Combat arms basic officer courses were expanded to three (field artillery) or four (infantry, armor) months. Leadership doctrine was made more explicit in US Army Field Manual (FM) 22–100, Military Leadership (1983), US Department of the Army Pamphlet 600-50. Leadership Makes the Difference (1985) and FM 22-102, Soldier Team Development (1987). Although excellent doctrinal guides on how to lead effectively were available, the specific tasks and even responsibilities of commanders for training, socializing and developing lieutenants remained unclear.

Research conducted in a sample of combat units in the early 1980s investigated experiences

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of lieutenants from the perspectives of the lieutenant, his company commander and his platoon sergeant.³⁸ The principal findings were:

- Lieutenants were strongly motivated to do a superior job, but were uncertain about what they should do and about the boundaries of their authority.
- Lieutenants were afraid of their company commanders and were reluctant to reveal their ignorance by asking them fundamental questions about their roles in the unit.
- Company commanders acknowledged that they had a role in orienting, socializing and training their lieutenants, but none saw it as a primary responsibility of command.
- Lieutenants were unsure about how to develop working relationships with their platoon sergeants.

The findings from this research provided information about what platoon sergeants, company commanders and battalion commanders could do to facilitate the professional development of lieutenants and their integration into their units.

One lieutenant's comments illustrate several of these points:

"Since I came on active duty I've gotten everything I asked for—Airborne School, Ranger School, good welcome from the unit. I got several letters while I was in the basic course. A friend was assigned as my sponsor. He was on an FTX [field training exercise] when I arrived so another lieutenant picked me up at the airport. My in–processing was quick and easy. My captain just sat me down and told me what my duties were and how to perform them. He gave

me all the information I needed at first, then has added to it every day. I have access to him, and he's easy to work with."

About one out of four lieutenants reported this kind of reception; they said it supported their sense of belonging and helped them deal with their anxieties about wanting to do well, but not knowing what to do. It was particularly important for the captain to give his lieutenant a comprehensive, but not overwhelming, briefing early on, and to supplement it with additional information over time. Only about one company commander in 10 did this. Most company commanders did not have their units, their missions or the roles of their subordinate units sufficiently in focus to give their lieutenants the structured guidance they wanted. Captains complained: "Look, I'm just learning my job. How can I train my lieutenants?" "We [captains] need to be trained in how to train lieutenants to relate to their NCOs." "I expect lieutenants to be technically proficient when they arrive from school." Some pointed out that their options were limited by systemic factors:

"I can give my platoon sergeants and lieutenants independence in the field. They can try things and make mistakes and learn from them. But not in garrison. There are too many nitpickers from higher headquarters."

Lieutenants reported that their captains were: "Too busy to bother with my problems; I would only go to him as a last resort." "It was clear that the company commander was overwhelmed. I asked other lieutenants." "[He is] not really training us. He takes us to the field and leaves us there, hoping everyone will pick up what's going on. He doesn't tell us."

Roughly three—fourths of the company commanders recognized that their ability to help their lieutenants was hampered by the lieutenants' fear of looking stupid and by their reluctance to bother an obviously overcommitted captain. Most commanders took a variety of steps to put their lieutenants at ease. "I told him, 'Look, come in any time. Feel free to ask questions." "I have a daily meeting with the officers and NCOs, so we're all together." "I meet once

a week with my lieutenants to talk about problems." These measures helped the lieutenants become more confident that their questions were valid and to feel more secure with their captains. "I was afraid to approach the CO [commanding officer]. But then we were together a lot on the FTX and now I feel I can ask him anything."

Not all captains made themselves available to their lieutenants. One company commander reported:

"Lieutenant B. was not originally supposed to come to this company, so his sponsor was from another unit. The other lieutenants and I had started out together, and we were sort of a closed group. He may have had a rough time with the other lieutenants. I was close to leaving the company so I don't think I took as much care as I might have. He was here almost a month before I had much contact with him."

More than half of the lieutenants experienced some form of rejection—no letters; no sponsor; no one to meet them; taken to the field when their wives had no place to stay; and denial that they were assigned to the unit. It was clear that while company and battalion commanders supported the concepts of welcoming, integrating and training new lieutenants, they accorded only incidental priority to behaving in ways that would realize those concepts. One captain stated an extreme position:

"Lieutenant G. won't be proficient when he leaves my company. I can't let him learn by doing because if he screws up I have to take the heat. My career comes before training him."

These and other issues were regularly discussed at periodic research and leadership meetings conducted under the auspices of the Center for Army Leadership. Their work resulted in the US Army Command and General Staff College's implementing the military qualification standards (MQS) program to define military tasks, standards and performance measures to guide the development of officers at each point in their career—starting from precommissioning schooling. The effects of this program showed up in research conducted in the mid–1980s. Some battalion and company commanders were mak-



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ing efforts to integrate and train lieutenants. There were successes and failures. ³⁹ One battalion executive officer, in an officer professional development class prior to an FTX, told his lieutenants:

"We'll be doing it for the first time as a team. Don't fuss about looking good. Drive on, protect the sanity of your troops rather than wear



Many company commanders and lieutenants were of the opinion that lieutenants needed to keep their rifle platoons longer than one year. . . . Lieutenants need time to learn, act and experience the consequences of their action over time. They need time to experience the development and effects of mutual trust and respect [and] . . . experience the feel of a solidly functioning unit so they will know what they should aim for in future commands.

everyone out trying to find out who shot John."

Company commanders were observed working one-on-one with their lieutenants in advance of operations to be sure the junior officer had thought through the problems. Lieutenants in two companies expressed gratitude to their captains for "protecting us from the colonel."

Battalion and higher-level commanders were beginning to recognize the delicacy and importance of the lieutenant-platoon sergeant relationship. One battalion commander said it was impossible for captains to train lieutenants, the platoon sergeants had to do it. Most lieutenants, in fact, adapted well to learning from their NCOs while nominally leading their platoons. One lieutenant who led the same platoon for

two years said his platoon sergeant accommodated to his level of knowledge:

"My first platoon sergeant would let me go to the brink, then pull me back to regroup. He and I both accepted his teaching role. With my second platoon sergeant, it was more of a partnership."

A growing number of lieutenants described excellent relationships with their platoon sergeants:

"My platoon sergeant has 17 years' service. I don't see me coming over with heavy authority on a man with so much experience. He had been away from troops for a few years, and I had some ideas from Ranger School that would make us more comfortable in the field. He said he had

learned some good stuff from me. That made me feel terrific. There is no real division of duties between us. Sometimes he gives an order, sometimes I do. We both check the training the squad leaders do."

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- Lieutenants need time to learn, act and experience the consequences of their action over time.
- They need time to experience the development and effects of mutual trust and respect.
- They need to experience the feel of a solidly functioning unit so they will know what they should aim for in future commands.

One extremely effective company commander explained to a researcher "Hink's First Law"—that most of the unpleasantness and conflict between people arises from insecurity. 40 Evidence from history and from recent research indicates that lieutenants learned most efficiently and became effective leaders of their platoons most quickly in supportive climates rather than in climates that exacerbated the anxieties they brought to their units. 41 One implication of this is that when the company commander establishes an interactive relationship with the lieutenant, anxiety decreases and learning increases. This requires that the lieutenant feel comfortable discussing issues honestly with his commander. Captains who treated their lieutenants with respect and who corrected them in the context of a learning experience saw them progress most rapidly. "The captain and the colonel were receptive and supportive. I never felt scared or uptight." The best description for this is "mentoring." Only a minority of captains reported behavior that fit this definition. While it may have made some sense in the early 19th century to use coercion to motivate, at the end of the 20th, it makes more sense to enlist lieutenants' active commitment by treating them as respected members of the officer corps.

The role of the lieutenant evolved from officer

trainee and bookkeeper in the 19th century to leader of a miniature combined arms force almost as big as a 19th century company. The evolution of his role imposes a parallel evolution in

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his preparation. The research team identified three systemic problems in this preparation. First, military culture was pervaded by fear. Subordinates were afraid of their superiors' evaluations, and superiors were afraid their subordinates would make them look bad. Second, there was an apparent belief by commanders that requiring results was the limit of their responsibility. They often did not require subordinate leaders to behave toward subordinates with professional trust, respect and care. The third systemic problem was that few captains understood which leadership behavior would be effective and which would be counterproductive.

The precommissioning, branch basic courses, Ranger School and specialty schools are the first steps in the training, socialization and integration of lieutenants. ⁴² But the MQS program by itself does not address all of the essential issues.

Both the Army schools system and commanders need to focus on interpersonal skills that are outside the realm of the mission essential task list.

The precommissioning and basic courses need to be expanded to include: extensive role-play

The precommissioning and basic courses need to be expanded to include: extensive role-play training focusing on, for example, relationships with NCOs; dealing with company commanders; establishing mutual trust and respect with enlisted soldiers; and developing feedback systems. The MQS program will enhance technical skills in maintaining and repairing weapons, vehicles, communications and other equipment on the dispersed battlefield.

training focusing on, for example, relationships with NCOs; dealing with company commanders; establishing mutual trust and respect with enlisted soldiers; and developing feedback systems. The MQS program will enhance technical skills in maintaining and repairing weapons, vehicles, communications and other equipment on the dispersed battlefield. More comprehensive formal training should be complemented by extended time in grade as a lieutenant and longer assignment as a platoon leader. Stabilization for at least 18 months (and preferably 24 months) in a platoon would provide the experi-

ence necessary for testing and developing leadership skills. Commanders should emphasize skills not included in the MQS system such as counseling and motivating more experienced NCOs and communicating with other soldiers of all ranks.

Adoption of a philosophy of mentoring rather than training by company commanders implies a shift in the Army's basic motivational mode from coercive to supportive. Respecting, trusting, developing, caring for, and interacting honestly with, subordinate leaders is more risky. stressful and time-consuming than coercing them. It requires that captains acquire interpersonal skills and knowledge prior to assuming command. It requires them to commit themselves to developing their lieutenants. Supportive captains grow stronger lieutenants; but to be supportive, captains require supportive battalion commanders who, in turn, will need support from their bosses. Mentoring, and the institution of supportive command climates, must start at the top. The Army of the 1990s will be smaller. It can afford to be even more selective in acquiring officers, and it has an opportunity to develop a culture of mutual trust, respect and support over time. AirLand Operations, with its high lethality and prolonged isolation, as well as rapid intervention in low- and mid-intensity conflicts, requires lieutenants who are ready when the balloon goes up. They must know their business, be fully integrated members of their platoons and have confidence that their leaders are committed to their success. MR

NOTES

The research was carried out as part of three projects under two elements
of the Walter Reed Army Institute of Research. The first, in 1980–1983, was
done by the US Army Medical Research Unit—Europe. The second, in
1984–1987, and the third in 1990 were done by the Department of Military Psychiatry in the Division of Neuropsychiatry. See notes 38 and 39.

^{2.} Roger Little reported that the noncommissioned officer (NCO) strength in the mile platoon he studied in the last year of the Korean War was one E-5 sergeant and two E-4 corporals. The rifle squad leaders were all E-3 privates first class. The platoon was authorized one E-7 master sergeant, five E-6 sergeants first class, three E-5 sergeants and five E-4 corporals. CPT Roger W. Little, "Collective Solidarity and Combat Role Performance." (Ph.D. diss., Michigan State University, 1955), 35-36, 76. A lieutenant who led a rifle platoon in Vietnam in 1969 reported that when he took over his platoon was one E-6 staff sergeant and one E-5 sergeant. LTC Michael Lee Lanning. The Only War We Had (New York: Up Books, 1987), 31, 37, 224. His platoon was authorized one E-7 platoon sergeant, lour E-6 staff sergeants. and eight E-5 sergeants.

plus several soldiers in the grade of E-4 specialist. A lieutenant took command of a rifle company in Korea in October 1952 that had a staff sergeant as a first sergeant, and two corporals and a private first class as platoon sergeants. COL David H. Hackworth, *About Face* (New York: Simon and Schuster, 1989), 234, 573–74.

^{3.} For eyewitness accounts of the roles of lieutenants in combat see COL David H. Hackworth (note 33), LTC Michael Lee Lanning (notes 30, 32, 33), LTC James R. McDonough (notes 30, 31). For post-battle accounts, see BG S. L. A. Marshall, *Bird* (Nashville, TN: The Battery Press, 1968), 32, 41–44, 50–56. 101–05, 150–86; *Pork Chop Hill* (New York: William Morrow, 1956): *The River and the Gauntlet* (New York: William Morrow, 1953): *Battles in the Monsoon* (Nashville, TN: The Battery Press, 1971): and *West to Cambodia* (Nashville, TN: The Battery Press, 1968).

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States (Washington, DC: J. and G. S. Gideon, 1841), 11.

8. Ibid., 185–86; George Patten, Patten's Army Manual Containing Instructions for Officers (New York: J. W. Fortune, 1864). This manual covers the organizations. nization of the Army, leadership and the duties of officers and NCOs in 10 pages. It then has more than 200 pages of sample forms required by the subsistence, quartermaster, paymaster and adjutant general's departments.

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12. Millett, 73, 76-77.

13. Moss, Officers' Manual, 1907 edition, 146-47.

14. Moss, Officers' Manual, 1911 edition, 187.

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42. The effectiveness of current instruction on leadership can be judged in part from comments the research team has heard describing precommission classes on leadership as "leadersleep" period.

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MAXIMIZING RC TRAINING The Battle Projection Center - NTC Linkup

Lieutenant Colonel Bruce A. Olson, US Army Reserve, and Major Lonnie E. Nesrsta, US Army Reserve

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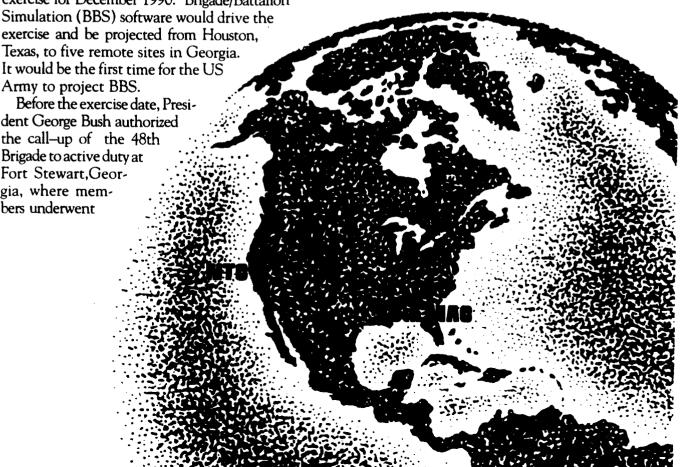
During operations Desert Shield and Desert Storm, the 48th Brigade, Georgia Army National Guard, participated in a projected battle simulation exercise while at the National Training Center, Fort Irwin, California. The authors describe the events leading up to, and execution of. the exercises. They also discuss the various problems encountered during the exercises and some of the steps taken to correct them. Finally, the authors offer some lessons learned from this experience.

COLLOWING Iraq's invasion of Kuwait on 2 August 1990, the Army alerted the 48th Separate Infantry Brigade (Mechanized), Georgia Army National Guard, for possible mobilization. In preparation for its activation, the brigade contacted the 75th US Army Maneuver Area Command (MAC) in Houston, Texas, to provide battle staff training. The 48th Brigade commander asked the 75th MAC to prepare and control a brigade-level command post exercise (CPX). The two units held an initial planning conference in October 1990 and scheduled the exercise for December 1990. Brigade/Battalion Simulation (BBS) software would drive the exercise and be projected from Houston. Texas, to five remote sites in Georgia.

Before the exercise date, President George Bush authorized the call-up of the 48th Brigade to active duty at Fort Stewart, Georgia, where members underwent

Army to project BBS.

mobilization training prior to deployment to Fort Irwin, California, for additional training in late December 1990. In order to receive additional training at the National Training Center (NTC), Fort Irwin, the 48th Brigade had its NTC rotation extended from the usual 20 days to 54 days. Consequently, the scope, dates, responsibilities and control plan, as envisioned at the October 1990 planning conference, shifted as these developments occurred. By December, the NTC had organizational and operational responsibility for the exercise, with



the 75th MAC in a key supporting role. This article will examine the conduct of these exercises, the viability of the 75th MAC's mission, as well as the capabilities of projected BBS exercises for future use.

The in–process review (IPR) conducted in December at Fort Irwin vested overall exercise control in the commander of the NTC, who identified the exercise objectives during the meeting. The NTC Plans and Operations Team later developed the exercise scenario to support these. These actions limited the role the brigade and battalion commanders played in NTC training decisions, thus bypassing those officers held responsible for the units' success or failure.

Designed as a series of single-echelon CPXs. the operations used the BBS software, driven by microvax computer facilities at the 75th MAC Battle Projection Center (BPC) in Houston, Texas, and projected via commercial telephone lines to computer work stations at the remote NTC location. The NTC scheduled two iterations of exercises at Fort Irwin—the first, during the period 13–15 January 1991, and the second for the period 3–7 February 1991. The series of exercises used the NTC Samaran Scenario and focused on improving brigade and battalion battle staff proficiency prior to the "force-onforce" exercises scheduled for late February. NTC planners did not design the scenarios to dovetail or be continuous. Thus, each operation order (OPORD) stood alone with separate sequences and time lines, and battalion operations were not synchronized with other battalions' missions. The first iteration scenarios included two task forces making deliberate attacks; two conducting deliberate defenses; two performing movement-to-contact and meeting engagements; and the brigade in a deliberate defense. The second iteration had two task forces in movement-to-contact and meeting engagements; two conducting deliberate defenses; and the brigade in a deliberate attack.

Each exercise varied in duration from 4 to 12 hours. The NTC Plans and Operations Team prepared the exercise OPORDs and conducted the brigade and division OPORD briefings. The

The [CPXs] used the BBS software, driven by microvax computer facilities at the 75th MAC Battle Projection Center in Houston, Texas, and projected via commercial telephone lines to computer work stations at the remote NTC location.

brigade and battalion commanders received the division or brigade OPORDs, respectively, approximately 12 hours before the exercise began. This allowed the brigade and task forces 6 to 8 hours to prepare, brief and rehearse OPORDs with task force or company role players. Role players and work station interactors then had about 2 hours to develop subordinate—unit OPORDs and complete initialization of the BBS data base for the exercise. The brigade and battalions had from 1 to 10 hours after the exercise began before they became engaged in decisive combat. Each CPX repeated this cycle.

The exercise plan divided roles and responsibilities for the exercise between the NTC and the 75th MAC. The commander of the NTC maintained overall responsibility for the exercise, and the 75th MAC had simulation and projection oversight. The NTC Plans and Operations Team developed the exercise scenario. wrote exercise documents and conducted OP-ORD briefings, incorporating NTC terrain and the Samaran army as the opposing force. NTC observer/controller (OC) teams facilitated the after-action reviews, and the Fort Irwin Directorate of Information Management (DOIM) coordinated exercise communications support at Fort Irwin, securing technical support from Continental Telephone (CONTEL), Fort Irwin telecommunications, the 177th Armor Brigade and the 48th Signal Platoon. The DOIM's area of responsibility included installing and maintaining communications systems carrying the simulation results and tactical traffic once these entered Fort Irwin proper. The NTC also sent opposing forces (OPFOR) liaison personnel from the 177th Armor Brigade to the BPC in

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Houston to ensure continuity between the NTC Samaran scenario and the simulation threat.

The 75th MAC had responsibility for projecting BBS from Houston to Fort Irwin. Working with the Fort Irwin DOIM, the 75th MAC BPC's signal officer coordinged communications support for simulation projection from Houston to Fort Irwin via commercial telephone lines and developed methods to retransmit or relay the simulation results from work stations in Building 130 at Fort Irwin to field locations. In addition, the 75th MAC and the 95th Maneuver Training Command (MTC), a subordinate unit, provided interactors at the computer work stations at Houston and Fort Irwin and furnished role players for echelons above and below the training audience on the first iteration. On the second iteration, the 177th Armor Brigade and the 9th Infantry Division (ID) augmented the 75th MAC, simulating echelons below brigade and battalion levels. Personnel in Houston simulated adjacent units and controlled the OP-FOR battle plan.

Conduct of the Exercise

Major elements of the 48th Brigade participated in the exercise to include its headquarters, two mechanized infantry battalions, two armor battalions, a field artillery battalion (direct support [DS]) and a forward support battalion (FSB). Selected individuals from the brigade's engineer company, air defense artillery battery, chemical, military police and signal platcons, as

well as soldiers from the 177th Armor Brigade and the 9th ID also joined in the exercise. Units operated in field locations at Fort Irwin, 15 to 25 kilometers from the exercise control headquarters, and did not have access to the computer terminals or the video screens at their field locations, thus requiring commanders to rely on reports from higher and lower headquarters to visualize the battle.

The 75th MAC and the 95th MTC had 141 officers and 24 enlisted personnel controlling the series of CPX simulations for the 48th Mechanized Brigade. The design of the manning table provided for two shifts in Houston which enabled continuous operations. Key points that ensured success in Houston included: staffing a 12-hour planning shift and an 8- to 10-hour execution shift; synchronizing shift and exercise schedules to ensure around-the-clock operations, a smooth transfer of responsibilities and the establishment of control by the execution shift prior to an exercise's beginning. These allowed the planning shift to be involved in all aspects of the simulated units' planning cycles and to be available to the exercise audience from the time the units received their orders and started their planning until after they issued their OP-ORDs. At shift change, the planning shift conducted a formal, working-session briefing that covered an update of the exercise time line, commander's intent and guidance, an intelligence briefing of the enemy situation and an operations briefing. Following this formal meeting, each staff officer, staff NCO and enlisted staff member met with his or her replacement for a one-on-one exchange. After the end of each exercise, selected representatives of the execution shift remained at the BPC and informed the planning shift, when it arrived, of the previous operation's highlights, results and changes that occurred since the planning shift's departure.

The manning at Fort Irwin for the 75th MAC and the 95th MTC included role players (four per work station, including company commanders or battalion staff and fire support team and fire support officer), computer interactors (three per work station), BPC technicians (two total,



The exercise used 11 major cells, each having a BPC-supplied work station—five at Fort Irwin and six at Houston. At Fort Irwin, during the battalion—level exercises, each task force had two work stations to represent companies (a total of four work stations) with the fifth work station handling the recon units, mortars and battalion trains' functions.

ideal would be three), signal officers and communications NCOs. Other than security, administration, signal personnel and BPC technicians, the 75th MAC (Forward) conducted operations at the NTC, using a split shift concept due to the design of the exercise. This procedure ensured maximum personnel coverage during peak exercise hours. Each morning, the 75th MAC had representatives present when NTC Plans and Operations issued the division or brigade OPORD to exercise units. Company commander and battalion role players received and rehearsed battalion or brigade OPORDs at field locations between 1600 and 1900, returned to Building 130 with the orders and updated the simulation data base shortly before an exercise began. Five hours prior to beginning an exercise. BPC technicians arrived at Building 130 to initialize the system, and computer interactors reported 2 hours before the start of the exercise to input brigade and batta 1 OPORD data. All interactors and role players had to be present during the 4 to 8 hours of the main battle. During the recon and counterrecon fight, Building 130 maintained a skeleton crew of interactors and role players. Throughout the exercise, signal personnel maintained 24-hour-a-day communication coverage.

Exercise Control Methodology

The exercise used 11 major cells, each having a BPC–supplied work station—five at Fort Irwin and six at Houston. At Fort Irwin, during the battalion–level exercises, each task force had two work stations to represent companies (a total of four work stations) with the fifth work station handling the recon units, mortars and battalion trains' functions. During the brigade–level exercises, each committed task force had two work stations to represent company or teams (a total of four work stations) with the reserve battalion, the DS field artillery batteries and the FSB on the fifth work station. Personnel from the 75th MAC and 95th MTC manned each

Each exercise used a separate scenario and data base and required about 5 hours to load and initialize the computer. Once operational, the work stations received computer—generated status reports for each element that formed the work station's task organization. Reports depicted losses, attrition, consumption and resupply figures, real—time movement estimates, intelligence information and so on. . . . The BBS hardware and software experienced virtually no downtime during either preparation or conduct of the exercise.

cell, supervising the computer battle-simulation functions of the work station and acting as lower-unit players. OCs from the NTC closely followed the activities of the brigade and battalion staffs and maintained constant coordination with the 75th MAC controllers at Fort Irwin.

The 75th MAC personnel at the BPC in Houston manned and operated six work stations. Two controlled the threat forces, one coordinated Air Force, corps and divisional artillery (less the DS battalion), one work station played all Army aviation and air defense assets. and one served as the senior control station (HI-CON) also handling administration and logistics for higher-echelon units. During battalionlevel exercises, Houston also managed the DS field artillery. In addition, the NTC's notional 52d ID (Mechanized) intelligence and administration and logistic cells operated out of the BPC, acting as the central planning and control element for the exercise simulation under the overall supervision of the exercise director and his deputy in Houston.

Commercial telephone lines linked Fort Irwin to the BPC in Houston, connecting the subordinate battalion, company and battery work stations to the BPC. These telephone lines transmitted all tactical unit data to the work stations from the microvax computer, served as the administrative communications net for controllers

and simulated tactical radio and wire communications between Houston and Building 130 at Fort Irwin. During the first iteration of exercises (13-15 January 1991), commercial telephone lines extended from Building 130 to unit field locations, and each site had facsimile facilities that simulated RATT (radio-telegraph transmitter) communications. During the second iteration (3–6 February 1991), commercial voice telephone lines keyed FM radio via voice-activated RWI (radio wire integration) switches designed, engineered, fabricated and tested by Major Frank Shearer of the 75th MAC in less than 36 hours after notification by the NTC of the change to a radio-only exercise. This allowed realistic tactical communications, although in this iteration. RATT communications could not be simulated from the field.

Each exercise used a separate scenario and data base and required about 5 hours to load and initialize the computer. Once operational, the work stations received computer-generated status reports for each element that formed the work station's task organization. Reports depicted losses, attrition, consumption and resupply figures, real-time movement estimates, intelligence information and so on. Player cells at the remote work stations translated these reports into SOP (standing operating procedures) format and relayed the information to their higher headquarters. Reports replicated realistic combat information and exercised the various unit headquarters by requiring staffs to manage the information and commanders to make decisions based on this data. In certain cases, such as the recon and counterrecon fight, role players had to script activities in order to meet training objectives for the 48th Brigade.

Special Situations Encountered

During the exercise, the 75th MAC personnel encountered no special situations or unusual problems regarding current Army doctrine. The BBS hardware and software experienced virtually no downtime during either preparation or conduct of the exercise, which transmitted and received data over a distance of 1,400 miles. No



It is particularly important that the simulation center, echelons above and below the exercise audience and OCs have a common understanding of the training objectives and scenario. Even with the best communications systems in place, as well as positive, open—minded individuals representing the various interests and training sites, some misunderstandings still occur.

protracted downtime occurred that required the control and interactor staff to use manual methods to portray the war to the 48th Brigade.

The National Simulation Center of the Combined Arms Command, Fort Leavenworth, Kansas, sent representatives for both iterations to observe BBS simulation operations and performance. The 75th MAC exercise staff documented simulation anomalies and reported these to the BPC civilian contractor for resolution. Since, by design, each exercise stood alone with a unique and discrete beginning time, an ongoing need to verify data base information existed throughout the course of the exercise. Prior to each exercise, the 75th MAC operations section handled this effectively by coordinating with civilian contract technicians and the senior control work station. BBS's resident memory cannot archive more than one starting exercise data base at a time, thus requiring each data base to be "dumped" at the end of an exercise prior to loading the next exercise data base. The BPC reduced the data base loading time by building and

storing multiple data bases on tape for subsequent exercises.

Due to the size limitations of the NTC "game box" in BBS, division and corps assets such as attack helicopters and combat service support elements could not be portrayed properly in the system. These assets had to be placed and monitored on tactical operations center maps, scripted as if they actually appeared in the game box, and introduced into the simulation through HICON. This caused constant activity at the HICON work station and, consequently, some delay in data transmission. Modification of the software could make HICON activities more effective by using two work stations for that function

Staff coordination between the NTC and the 75th MAC improved from the first to the second iteration due to the implementation of the formal shift change procedure and synchronization of the shifts with the exercise schedules. While this seems a rather obvious procedure, it deserves some discussion. It is particularly

Although interstaff coordination challenged the exercise controllers, communications became the single biggest undertaking of the exercise. For example . . . the Fort Irwin DOIM programmed the commercial line usage based on the post's normal commercial use of between 20 percent to 30 percent—much less than the 100 percent line use that the exercise required. This jammed the lines at the beginning of an exercise. At the same time, static on the lines caused the work station modems to disconnect.

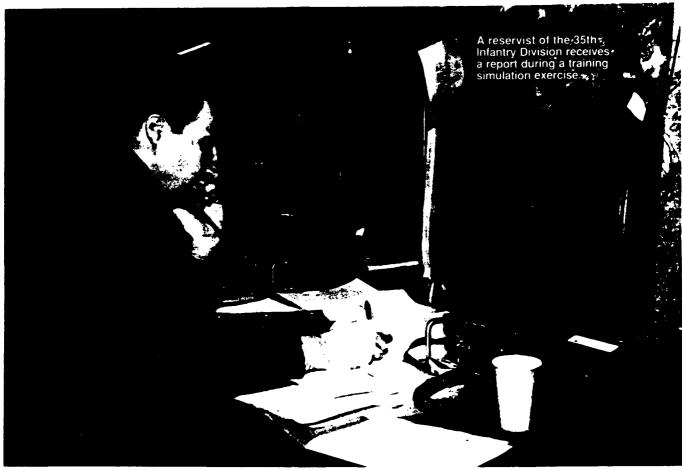
important that the simulation center, echelons above and below the exercise audience and OCs have a common understanding of the training objectives and scenario. Even with the best communications systems in place, as well as positive, open—minded individuals representing the various interests and training sites, some misunderstandings still occur. For example, in one case, the execution shift at Houston misinterpreted agreements reached between the planning shift and the 75th MAC (Forward) senior controller, causing a need for further clarification from the remote site as the beginning of an exercise approached.

The uniqueness of limited full-time manning in Reserve units influenced factors in exercise development and execution. It became obvious early in the preparation of the exercises that the 75th MAC combat force's full-time staff of one was not adequate due to the time constraints and sense of urgency surrounding the exercise. The command ordered one officer and one NCO to active duty as administrative augmentation and used the full-time BPC staff to assist in coordinating administrative, as well as scenario, issues with the Active Component personnel at the NTC. Due to the rapidly shifting concept of the exercise caused by the world situation, a clear delineation of ever-changing roles and responsibilities became difficult to identify. The small 75th

MAC staff proved inadequate to coordinate all of the details of the training efforts. Clearly understood and firm roles and responsibilities would have better ensured the effectiveness of this spartan planning staff and saved money, yet this was not the case since change became the norm during the preparation for, and execution of, the exercise. Between exercise iterations, the 75th MAC increased the staff by extending selected personnel on active duty. This, coupled with the experience of the first iteration, allowed more efficient coordination between the 75th MAC and the NTC regarding exercise schedules and scenarios. Also, continuing selected personnel on active duty helped to maintain good employer and employee relations, since the activations had reservists absent from their jobs only once in a 30-day period instead of twice. Although the time away from the job was longer, employers seemed to accept the one-time absence more readily than several short-term ones.

Although interstaff coordination challenged the exercise controllers, communications became the single biggest undertaking of the exercise. For example, when initially defining telephone line usage, the Fort Irwin DOIM programmed the commercial line usage based on the post's normal commercial use of between 20 percent to 30 percent—much less than the 100 percent line use that the exercise required. This iammed the lines at the beginning of an exercise. At the same time, static on the lines caused the work station modems to disconnect. CONTEL quickly installed filters and reprogrammed line usage, thereby correcting the shortcoming. Afterward service from Houston to Fort Irwin proved excellent. On the other hand, the establishment and maintenance of tactical communications at the NTC—the post DOIM's and the NTC Plans and Operation Team's responsibility—did not meet with similar success. This may have resulted from the NTC's unfamiliarity with BBS communications requirements.

Another example of the seriousness of communications issues occurred during the first iteration when the Fort Irwin DOIM identified pos-



Reserve forces' full—time manning does not approximate the Active
Component level. Therefore, the Reserve Components cannot respond in kind or
manner to frequent changes unless mobilized. Also, when exercise schedules are
adjusted, the impact reaches into the civilian community, causing employers to
reconcile production and work schedules. If these changes are not accomplished
with finesse, they result in employer alienation, undermining support for
the reservists that has taken decades to build.

sible fiber-optic commercial drops at designated field sites for CONTEL and the 48th Brigade to tie into as they established their command posts (CPs). Although Department of Defense contractors had recently installed the commercial lines, the DOIM had not accepted the contract as complete. When CONTEL and the 48th Brigade tried to tie into these lines without authorization from the DOIM, they came close to negating the contractor's obligations for further required work, as well as the warranty. The lines represented a multimillion dollar cost to the government. Fortunately, the communications personnel did not damage the lines. This oversight apparently resulted because Army personnel did not understand communications reguirements, and the DOIM did not know the unit's training plans.

The break between iterations allowed the

75th MAC and NTC signal personnel to rework communications limitations and, in concert with CONTEL, to correct the shortcomings. At the same time, the NTC explored the possibility of using FM radio in lieu of commercial lines to the field locations. The use of FM radio would free units from having to locate next to the commercial drop lines, thereby promising more realistic training and, at the same time, eliminating reliance on the commercial telephone lines to the field. The NTC commander's emphasis on training realism influenced the decision to go with FM radio and resulted in the design of a RWI system by Shearer to accommodate the 48th Brigade's training objectives. Although the introduction of the new communications system resulted in a new learning cycle, once in place, it proved to be a better training vehicle.

The experience with the 48th Brigade at the NTC indicates that the BBS is an excellent exercise driver for staff training. The results of BBS engagements on NTC terrain with a doctrinal OPFOR replicated those experienced during force—on—force MILES (multiple integrated laser engagement system) exercises. Although the simulation will not validate orders, BBS—driven CPXs allow battle staffs to make mistakes at a lower cost than other training alternatives while conducting staff training prior to actual maneuvers.

Lessons Learned

The first projection of BBS to remote training sites gives insight into the system, its capabilities and limitations, as well as the role of the 75th MAC's BPC for future computer-driven staff exercises. In addition, it provides a foundation on which to build forthcoming BBS projected exercises. During the preparation phase, a clear understanding of exercise roles and responsibilities is essential to efficiency and unity of effort. Usually, these are established and identified at the initial planning conference and confirmed during IPRs. In the 48th Brigade exercises, the world situation, as well as the Active Component's penchant for change due to a greater flexibility resulting from its full-time manning status and unfamiliarity with BBS, caused numerous adjustments, as many as 13 in one two-day period. Reserve forces' full-time manning does not approximate the Active Component level. Therefore, the Reserve Components cannot respond in kind or manner to frequent changes unless mobilized. Also, when exercise schedules are adjusted, the impact reaches into the civilian community, causing employers to reconcile production and work schedules. If these changes are not accomplished with finesse, they result in employer alienation, undermining support for the reservists that has taken

decades to build. The active force needs not only to empathize with this aspect of change, but also with the increased personnel costs when reservists are ordered to duty too early. It is essential that exercise roles and responsibilities be defined early and all participants be informed of them. Changes should be minimized, and one way to facilitate this is to ensure that decision makers are familiar with the BBS system's capabilities and limitations.

The experience with the 48th Brigade at the NTC indicates that the BBS is an excellent exercise driver for staff training. The results of BBS engagements on NTC terrain with a doctrinal OPFOR replicated those experienced during force-on-force MILES (multiple integrated laser engagement system) exercises. Although the simulation will not validate orders. BBS-driven CPXs allow battle staffs to make mistakes at a lower cost than other training alternatives while conducting staff training prior to actual maneuvers. Also, the dynamic nature of the NTC necessitated continuous coordination; thus, any exercise of this size, scope and duration that incorporates Reserve units such as the 75th MAC requires an augmentation of the Reserve unit's full-time staff to ensure the success of external coordination.

During any BBS exercises, whether at NTC or elsewhere, four or five player-controllers and one interactor are needed at each work station for each shift. Each company should have its own work station, and exercise units should provide role players. In this series of exercises, the 75th MAC, 95th MTC and selected NTC personnel performed these functions. Unfamiliarity with team and task force battle drill and SOPs undermined execution and staff performance. For battalion-level BBS exercises, role players should include the company commander, the executive officer, the first sergeant and the fire support team. For brigade exercises, playercontrollers should be the battalion commanders with their staffs. Simulation center work station SOPs can define player-controller duties in great detail and ensure a quick train-up for the augmentees. SOPs should include work station

setup, status boards map boards, and define visual aids, desk-space and wall-space requirements.

Users of BBS must continue to suggest software improvements at every opportunity. Trying to merge tactical reality with BBS software presents numerous limitations such as movement under mortar and artillery fire. Unit SOPs and battle drills instruct commanders to move out of the target area at maximum possible speed as soon as they come under attack. But when a marching unit receives fire from mortars, BBS slows down the unit, not because that necessarily occurs in battle, but because of time constraints in the software system while inputting fire and movement orders. Each BBS command gets a part of the game clock. Role players and interactors discovered this and attacked units with mortars to slow the march column, and then killed it with artillery fire. Thus, gamesmanship by some of the role players and interactors can detract from the quality of the training. Part of the reason for the gamesmanship can be attributed to lack of a functional operations plan, but the majority of fault lies with the players and interactors themselves. Tighter game control can short-circuit gamesmanship. In planning game control such as coordinating and integrating the commander's training objectives with OPFOR. the exercise director (forward) needs a constant update of future events. Also, interactors need to be sensitive to future events and alert for possible "show stoppers" like the combination of mortar and artillery fire. When encountered, show stoppers should be brought immediately to the The first projection of BBS to remote training sites gives insight into the system, its capabilities and limitations, as well as the role of the 75th MAC's BPC for future computer—driven staff exercises. In addition, it provides a foundation on which to build forthcoming BBS projected exercises. During the preparation phase, a clear understanding of exercise roles and responsibilities is essential to efficiency and unity of effort. Usually, these are established and identified at the initial planning conference and confirmed during IPRs.

exercise director's attention. If the situation cannot be fixed through the simulation, then it must be scripted to present realistic results.

If events in the Persian Gulf have done anything for the US Army, it is the validation of the concept of NTC training. As US forces return from the Persian Gulf, the NTC-type force-onforce training will be more in demand than ever. Projected exercises allow units to conduct low-cost train-ups at home stations prior to deploying to the NTC or other training locations. Once there, it gives units the chance to rehearse over the same terrain they will fight on. The 75th MAC's capability to project battle staff training successfully in a variety of environments and scenarios provides an unparalleled training opportunity for units desiring these training advantages. **MR**

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During wartime, noncombat casualties have always been an unnecessary drain on combat power. Though things have been getting better, operations Desert Shield and Desert Storm followed the same pattern. The authors look at the source of combat accidents and suggest two areas where a reduction of accidents in future conflicts could be achieved. An improved application of risk management techniques and a battle focus in safety programs can help break this mold.

PERATIONS Desert Shield and Desert Storm provided excellent opportunity to assess the effectiveness of a wide variety of Army concepts and programs. The Army Safety Program is among those that were put to the test. This article assesses progress in realizing the potential of risk management and safety concepts as combat multipliers. It also reviews areas where additional accident prevention progress is possible and outlines steps to maximize that potential.

Desert Shield and Desert Storm took place in the midst of one of the most remarkable sustained improvements in Army accident prevention in history. Figure 1 compares 1986 to 1990 in the basic program indicators—total accidents, deaths and injuries. The reductions have been sustained and are remarkable. But, as good as they are, these peacetime achievements gave us no real assurance that accident losses in future combat would be any less than they were in the last major war—Vietnam. The bitter legacy of that war is 5.700 accidental deaths, 106,000 disabling injuries and an estimated \$6 billion in damage. That is nearly 20 percent of all deaths and injuries, nearly half of all aircraft losses and even higher percentages of losses of other materiel. Did Desert Shield and Desert Storm produce the same crop of wasted soldiers and equipment? Fortunately, the answer is no—at least not on the scale of Vietnam. This is due, at least in part, to the very short duration of the combat phase and other special circumstances (no alcohol was

certainly not the least of them). However, much of this success is the result of the progress the Army has made in integrating safety into its operational processes and leadership ethic.

The safety successes in peacetime carried over, at least in part, to combat, as evidenced by substantially lower per capita fatality and injury rates. The value of risk-management concepts was also demonstrated. However, the Army's safety record in *Desert Shield* and *Desert Storm* can be viewed positively only against the perspective of Vietnam and other wars. We cannot ignore the reality that the majority of the deaths and injuries in *Desert Shield* and *Desert Storm* occurred in accidents. And looking at the individual accidents that produced these deaths and injuries results in the depressing realization that most were completely preventable.

The origins of some accidents in combat are found in the safety and risk—management practices and procedures used in training. Preventing accidents in future conflicts depends on expanding the application of effective risk—management procedures during training. Desert Shield and Desert Storm revealed two major areas where opportunities exist to achieve significant reductions in accidents in future conflicts. These same procedures will also contribute to improved combat capabilities and to substantial reductions in accidents in training.

Improving Risk Management.

The first of these two areas is improved application of risk management by all levels of leadership. Today's Army has realized only a small portion of the potential safety and training realism benefits of thorough implementation of risk management. This is because nearly all Army safety standards for training and combat existing today are the result of traditional intuitive, ad hoc risk—management procedures. These pro-

	FY 86	FY 90
Total Accidents	11,862	7,471
Total Fatalities	659	357
Total Injuries	10,258	6.581

Figure 1. Army Accident Losses

cedures have resulted in a training environment in which some risks are overcontrolled, unnecessarily restricting training realism, while other risks are undercontrolled, resulting in unnecessary accidents. The Army must move from ad

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hoc, add-on risk management to systematic, integrated risk management.

Examination of *Desert Shield* and *Desert Storm* accidents reveals that the most important risk–management skill is the ability to recognize risks. This ability to see the risks inherent in an operation used to be called, somewhat mystically, the "sixth sense of safety." Today we are able to define this risk–recognition skill and other risk–management skills as specific tasks, conditions and standards.

The US Army Training and Doctrine Command (TRADOC), Fort Monroe, Virginia, and the US Army Safety Center (USASC), Fort Rucker, Alabama, are currently very active in developing and integrating these risk—management skills into leadership training. All TRADOC leadership courses either have, or will soon have, stand—alone risk—management instruction. Recently published field manuals (look at US Army Field Manual (FM) 25–101, Battle Focused Training, and FM 1–114, Tactics, Techniques and Procedures for the Regimental Aviation Squadron, as examples) now include integrated safety and risk management. Risk—management courses are now available from

USASC to assist field commanders in training leaders who need update training in risk management. New risk—management job aids are also being developed, and improvements are being made in existing ones. Two of these job aids are of special interest. One is a total risk—assessment worksheet recently successfully tested in TRADOC. It provides a tool for the integrated consideration of all sources of risk in an operation. The other is a fratricide risk—assessment checklist being designed in TRADOC. It will pinpoint sources of fratricide risk in both training and combat.

Risk Taking versus Gambling. A special command responsibility is creating a positive climate for the application of risk management. FM 100–5, Operations, demands leaders who will take risks. It specifically calls for "audacity" and demands "subordinates who are willing

FM 100-5 demands leaders who will take risks. It specifically calls for "audacity" and demands "subordinates who are willing and able to take risks and superiors who nurture that willingness and ability in their subordinates."

But what is the distinction between prudent risk taking and "gambling," and how are subordinates made aware of this important distinction?

and able to take risks and superiors who nurture that willingness and ability in their subordinates." But what is the distinction between prudent risk taking and "gambling," and how are subordinates made aware of this important distinction? To this point, the all too common conclusion is that a risk decision that succeeds is a prudent one; a risk decision that fails is a gamble. Risk management provides a more sophisticated distinction that allows us to distinguish between a prudent risk and a gamble regardless of the outcome of a particular decision.

A risk is prudent when a leader systematically applies a risk-management process like that

Identify Risks

Supervise	Assess Risks
Implement	Make Decisions &
Controls	Develop Controls

Figure 2. Five-Step Risk Management Process

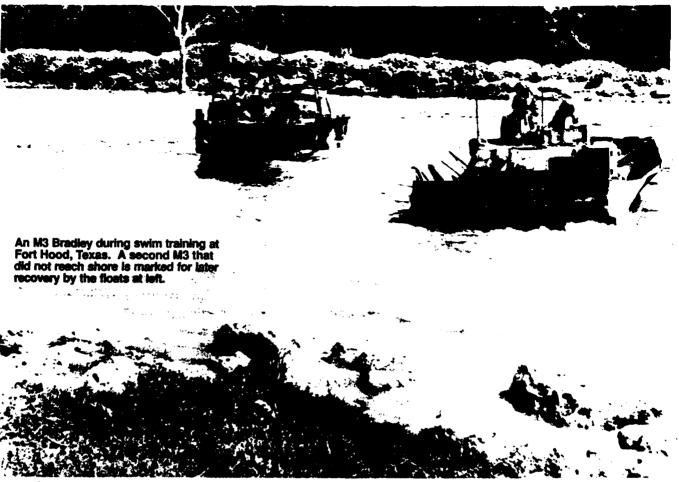
depicted at figure 2 and reaches a considered decision that risk benefits warrant acceptance of the risk. Gambling is accepting a risk without systematic consideration of the potential consequences of taking the risk.

How does command climate affect risk taking and gambling? Consider this example:

A junior leader is conducting training for a task that involves a time standard, such as emplacing a communications site. Elements of the task include application of various safety standards and checks. In an effort to improve time performance, the leader omits one of the safety checks. No accident results, and the omission is not noticed or corrected. This leader has gambled and won—this time. The leader is rewarded for the excellent time achieved.

In this command climate, the unit will experience a steady deterioration of risk controls and standards that will sooner or later produce an accident. Assuming that the required risk control was appropriate, the accidents that will result from dropping the prescribed control will, in time, cost more than the benefit gained from the shorter setup time. Overall operational effectiveness has been decreased.

Another leader in the same unit performs the same task boldly and aggressively, but follows all established standards. Due to some uncontrollable variable (that is, an accepted risk) or some previously unrecognized risk, the unit experiences an accident. The leader is disciplined by his superiors in a misdirected desire to "hold someone accountable" even though the leader complied with all standards, and the accident was due to factors beyond his immediate control. In this command climate, the potential is there for leaders to become overly conservative, tentative and far from the bold risk takers demanded by FM 100–5. Why accept any risk at all if supe-



Commanders must provide subordinate leaders with a practical understanding of risk management and the commander's intent regarding the management of risk. Then leaders must hold gamblers accountable even when they appear to experience success. Prudent risk takers should be protected even when they experience accidents. The long-term result will strengthen bold risk taking by Army leaders and reduce both gambling and excessive conservatism.

riors are going to punish the leader for accidents regardless of compliance with standards? This is an important question that must be dealt with early in every leader's development.

To avoid these outcomes, commanders must provide subordinate leaders with a practical understanding of risk management and the commander's intent regarding the management of risk. Then leaders must hold gamblers accountable even when they appear to experience success. Prudent risk takers should be protected even when they experience accidents. The long–term result will strengthen bold risk taking by Army leaders and reduce both gambling and excessive conservatism.

Opportunities exist to improve risk-management skills by improving the conduct of training. Consider the typical live-fire range as an

example. The squad leader arrives at a squad assault course. He may or may not have the opportunity to select his own assault plan; it is often imposed on him because of range vifety restrictions. Only rarely is he required to develop the risk controls that he would use in combat. Instead, he is directed to follow certain procedures imposed by range safety regulations. For example, he may not be allowed to conduct a tactically superior flanking maneuver because the angled range fan for that course of action would overlap adjacent training areas. As a result, the squad leader gets no opportunity during training to develop the risk-management skills he will need in combat. Instead, he is directed to follow safety procedures that may have absolutely no applicability in combat. The result is training that may be more negative

than positive. It is unrealistic conditioning.

Why not review this kind of training and, whenever possible, add the requirement for the leader to develop needed risk controls? The

Many safety standards that are needed for prudent control of risk in training do not make sense in combat.... For instance, the detonation of any quantity of explosives up to 35 pounds requires a 300-meter safety distance. This distance is impractical in many tactical situations and certainly not always needed. Leaders who have spent their professional lives using these training safety standards will naturally have a tendency to apply the standards in combat.

The Army must get rid of safety restrictions on realistic training that have no real value. . . . [A good] example occurred a few years ago at a major installation. A couple of serious accidents occurred involving tracked vehicles moving at high speeds. Alarmed, the division commander directed that all vehicles would be restricted to a top speed of 25 miles per hour in the training area.

leader would face the "dual challenge" of developing the risk controls needed in combat and then any additional requirements that may be needed to further control risks in training. Even if legitimate local range safety restrictions required using different procedures, the leader would understand why he is doing what he is doing and would be acquiring valuable risk—management skills. An important initiative in this area currently being considered is a program to inject added realism into the National Training Center, Fort Irwin, California, and other major live—fire training by requiring leaders to assess combat safety risks much more actively. In some cases, leaders would be required to react to simu-

lated risks based on analysis of recent wartime accidents. Similar initiatives have already been successfully used in local training areas. Widespread adoption of the dual challenge (develop combat risk controls, add needed training safety controls) would do more to produce capable risk—taking leaders than any other action. And it would cost little or nothing.

Battle Focus in Safety Programs. The second of the two actions that can reduce future combat accidents is adoption of improved battle focus in safety programs.

Most unit safety programs have been developed around the garrison environment. As a result, when units deploy to combat, the programs are impractical, and they are simply abandoned. Safety programs must be developed with the battlefield in mind. Garrison considerations can be added as needed, but they must be recognized as add-ons and peeled off when units deploy. The core is retained. USASC learned this lesson the hard way in Desert Shield and Desert Storm. When events began to unfold, the USASC found that it had no contingency mission, no contingency plans and no doctrine for field safety support. There had been little battle focus in the development of the organization mission. This deficiency is being remedied in the Safety Center, and it must be remedied in the safety programs of units Armywide.

Even when safety has been integrated into field-training operations, the standards applied often lack any relevance to combat. Some standards in US Army Regulation 385-55, Prevention of Motor Vehicle Accidents, relating to motor vehicle safety were often impractical in Desert Shield and Desert Storm. For example, those standards related to hours of driver operation and use of assistant drivers would have unreasonably impeded some phases of the logistic operation. Naturally, they were dropped or modified. In many units, standards that were workable were also dropped, and some unnecessary risks resulted. For example, while many ammunition storage standards could not be complied with under conditions existing in Desert Shield and Desert Storm ports, others clearly



[Some] training seems to be highly realistic, but may contain hidden traps that can, if not guarded against, cause casualties in combat. For example, the tire house (a MOUT training facility using sand-filled tire walls to permit training with live fragmentation grenades and automatic small arms fire) can create the impression that walls are bulletproof. Of course, real walls are usually not bulletproof.

could have been that were not. The result could have been a catastrophic accident. When standards lack across—the—board battle focus, the battle—valid standards are jeopardized in the effort to sort out the invalid ones.

Many safety standards that are needed for prudent control of risk in training do not make sense in combat. Some range safety regulations exemplify this. For instance, under Army regulation 385–63, Policy and Procedures for firing Ammunition for Training, Target Practice and Combat, the detonation of any quantity of explosives up to 35 pounds requires a 300–meter safety distance. This distance is impractical in many tactical situations and certainly not always needed. Leaders who have spent their professional lives using these training safety standards will naturally have a tendency to apply the standards in combat. This is especially true if they have never been told that the

standards are intended for training safety only. In practical terms, the leader is left without guidance. If the standard of 300 meters is impractical and sometimes unnecessary, what is the real risk at closer distances? The leader has no way of knowing because the standard gives no clues. Lives can be unnecessarily lost as a result. An important step forward in this area is the ongoing development of new range surface danger zones (SDZs). These new SDZs will allow leaders to determine the actual risk arising from friendly weapons in a complete spectrum from totally safe to 100 percent certainty of injury or death. Fully implemented, this initiative will have a dramatic, favorable impact on accidents and fratricide incidents in future conflicts. In the meantime, essential training safety standards that are unworkable in combat need to be clearly labeled "Training Only."

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but may contain hidden traps that can, if not guarded against, cause casualties in combat. For example, the tire house (a MOUT [military operations on urban terrain] training facility using sand-filled tire walls to permit training with live fragmentation grenades and automatic small

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arms fire) can create the impression that walls are bulletproof. Of course, real walls are usually not bulletproof, a fact that could probably be established in combat by incidents of fratricide. The tire house is highly effective and provides realistic training, but troops must be warned of these kinds of traps, which are more numerous than we often realize.

Finally, and most important, the Army must get rid of safety restrictions on realistic training that have no real value. These restrictions increase risk to the soldier by serving as barriers to effective training. Perhaps the best example occurred a few years ago at a major installation. A couple of serious accidents occurred involving tracked vehicles moving at high speeds. Alarmed, the division commander directed that all vehicles would be restricted to a top speed of 25 miles per hour in the training area. Military police were used to periodically enforce this limit in the field. Presumably, the commander's intent was to restrict speeds tem-

porarily while other remedies were applied. In fact, the restriction lasted for years. In this case, an operational capability (the ability to operate tracked vehicles near their operational envelope) was sacrificed in the name of safety. All that was actually achieved was to transfer the risk from training to future combat. Rather than sacrificing realism, the procedural, policy, training and materiel weaknesses that caused the accidents should have been defined and corrected. The knee-jerk speed restriction simply crippled the division's capabilities and hid the weaknesses that caused the accidents. In combat, these hidden causes would have surfaced quickly, producing accidents and reducing combat effectiveness. Hundreds of these unnecessary restrictions have accumulated over years of ad hoc risk management; they must be rooted out and eliminated.

Implications for Combat Safety

More effective Army risk management, as outlined above, would result in the following:

- A significant improvement in training safety. In some test applications, training risks have been reduced by 50 percent or more.
- Significant improvements in training realism. These improvements will reduce the risk of accidents in combat, as well as the possibility of defeat, due to ineffective training. It can be contended that improved battle focus in training safety can do more to contribute to tough, realistic training than any other factor except more resources. Improved training realism and better battle focus in unit safety programs create the potential for substantial reduction. In the level of combat accidents experienced in *Desert Shield* and *Desert Storm*.
- Leaders who are more capable and motivated to display the risk-taking "audacity" demanded by FM 100-5.

A good example of the use of safety risk management to achieve all three of these benefits is the "tire house." Systematic application of safety risk management to the original tire house procedures (developed using traditional adhoc procedures) resulted in the following.

- Identification of 50 percent more hazards, including some of the most serious risks in this training.
- Development of more than 60 viable actions to increase safety of the training.
- Development of 12 recommendations to increase realism and training effectiveness.
- Suggestion of procedures to improve the tactical and risk-management challenges to leaders.

Actions to Consider

The preceding discussion can be summed up in seven specific recommendations. First, we must redesign unit safety programs to improve battle focus. Installation and division safety personnel are currently being provided guidance on how to do this. Second, we can improve integra-

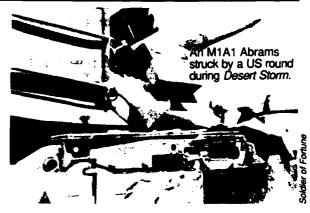
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tion of risk management into operational planning processes and training management. We need to look at the training management cycle, command post exercises, after-action reviews and the other mainstream operational and training processes to assure risk-management factors

Not So Friendly Fire

A special concern arising during *Desert Storm* was fratricide, the destruction of friendly personnel or materiel resulting from mistaken identification or collateral damage from firing on the enemy. Like ordinary accidents, the frequency and severity of fratricide accidents can be significantly reduced through application of risk management. The decision to fire or not to fire on an ambiguous target is inherently a risk decision. It involves estimating the risk to the firer (or other friendlies) and the potential tactical loss in not firing versus the risk to friendlies in firing.

The decision must factor in the degree of uncertainty about the identity of the target. This uncertainty can range from near total certainty to total uncertainty. The decision itself is often made in a matter of seconds; however, the situation in which the decision must be made can often be influenced far in advance. All of the techniques of safety risk management apply to prevention of fratricide. The potential for fratricide can be identified; the fratricide risk can



be assessed; control options can be developed; decision guidelines established and control options implemented and practiced.

Two recent Army initiatives (among scores being considered) illustrate how the risk of fratricide can be reduced. First, by realistically integrating friendly targets (both visual and thermal) among enemy targets on firing ranges, leaders and soldiers can become practiced in effectively making these tough fire—no fire decisions. Second, by requiring leaders to solve the safety problem (to include fratricide aspects) in typical field training, the experience is there when these problems must be solved in combat. Fratricide is perhaps the ultimate tragedy on the battlefield. While it can never be completely prevented, effective risk—management procedures can significantly reduce its impact.

are appropriately represented. TRADOC–developed FMs and training publications and USASC publications and training materials are now showing the way to this integration. Third, we must provide leaders at all levels with solid

Installation and division safety personnel are currently being provided guidance on how to [enhance battle focus]... We can improve integration of risk management into operational planning processes and training management. We need to look at the training management cycle, command post exercises, after—action reviews and the other mainstream operational and training processes to assure risk—management factors are appropriately represented.

risk-management training. This is well underway. Fourth, we can and must establish a consistent command climate that supports and protects prudent risk taking and holds gamblers accountable. This may seem difficult to achieve; however, the commander who has a good grasp of the risk-management concept will have little difficulty discriminating between a prudent risk and a gamble. Once this distinction is made, all that is needed is the moral courage to protect the prudent risk taker. Conversely, the commander must be ready to correct

gamblers even when they seem to be winners. Gambling is always wrong because sooner or later, it unnecessarily injures or kills soldiers and reduces operational effectiveness.

Fifth, we can systematically review training for opportunities to require leaders to deal with the double challenge of identifying safety standards for combat and training. This step alone could contribute substantially to reduced combat accidents and fratricide. Sixth, in the short term, we can conduct systematic reviews of training to detect and eliminate unnecessary safety restrictions in training. With a focused effort, this could be accomplished in a year. The result would be a major improvement in training effectiveness. Seventh, we can systematically review training carefully to detect and correct the negative training that some safety procedures may create. This also could be accomplished Armywide in a year or less.

The Army is about to experience one of the most dynamic periods in its recent history. The reduced force will be confronted with a continuing, albeit changed, worldwide mission. This smaller force will have to be more efficient and more battle—ready to maintain mission capabilities. Safety risk management is one of the tools immediately available to accomplish this. By contributing to reduced losses in training and combat, enabling greater training realism and developing more capable leaders, safety risk management provides a meaningful boost to Army capabilities. **MR**

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from BUREAUCRACY to "FD G-LOCGRACY"

Lieutenant Colonel Jeffrey B. Staser, US Army, and Karen K. Staser

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The Department of Defense describes Total Quality Management as a process directed at establishing organized, continuous process—improvement activities, involving everyone in an organization in a totally integrated effort toward improving performance at every level. The authors look at the civilian personnel system and offer their views on how to enhance quality, effectiveness and efficiency in today's rapid and changing environment.

VER notice how people tend to act the way they are treated? Do you believe bureaucrats are motivated more by "job security" than by "opportunity to contribute?" Does the term "bureaucrat" bring to mind one who impedes progress or one who contributes? Through no fault of the individual, we may have designed a personnel management system that encourages a self-fulfilling expectation of personal ineffectiveness. The "system" does not always treat people as if we trusted them to act responsibly. The good news, an exciting challenge to senior management, is that we do have the means to make things right, starting today.

First, consider the question, "Who is in charge?" Two German sociologists, Max Weber (1947) and Robert Michels (1949), were among the first to point out that the central issue for modern societies is no longer economic structure—capitalist, socialist or communist. No, the central issue has become the increasing dominance of public bureaucracy over appointed leaders. Today, the leadership role is easily usurped by the increasingly complex nature of organizations. Why?

Rules and precedents govern. Coalitions of power brokers dominate the decision—making process by invoking rules or citing precedents, often to block changes they perceive as threats. As explained by Jeffrey Pfeffer in *The Micropolitics of Organizations*, membership in the dominant coalition shifts depending on the issue at hand. Since organizations are simply collections of people, knowledge of personnel management rules appears to be central to virtually every significant decision made. They govern placement, training and rewards. Certainly the Civilian Personnel Office (CPO) is a powerful and welcome member of any coalition seeking change within the government. Reform—minded, appointed leadership is ill—advised to rush changes before bringing a professional staff on board.

The answer then to the question "Who is in charge?" is simply "We are." We cannot look to either the appointed leadership or to the professional bureaucrat, alone, to fix accountability. We must empower and encourage both to make a collective effort to dominate rules and precedents. The contest for control is between "us"

The views expressed in this article are those of the author and do not purport to reflect the position of the Department of the Army, the Department of Defense or any other government office or agency. This article was adapted from the authors' essay that won the 1991 Nick Hoge Award for Professional Development.—Editor

Coalitions of power brokers dominate the decision-making process by invoking rules or citing precedents, often to block changes they perceive as threats.... Membership in the dominant coalition shifts depending on the issue at hand. Since organizations are simply collections of people, knowledge of personnel management rules appears to be central to virtually every significant decision made.

and the rules. But as Peter M. Blau and Richard A. Schoengerr demonstrated in their study of a state's civil service system, there is a positive association between organizational size and the extent of written personnel regulations.³ The sheer size of our federal civil service system makes the body of governing rules formidable.

Rules: Obstacles or Bridges?

Rules are not always bad or constricting; in fact, rules can promote decentralized decision making by formalizing delegation of authority. The Aston Group studied 46 organizations, concluding that more formalized arrangements permit more decentralized decision making. But what about personnel management rules? What role do they play in enhancing overall effectiveness within the federal government?

The benefits of rules that define personnel management policy are apparent. Line managers are only a phone call away from experts on training and development, recruitment and placement, position management and classification, employee and union relations and a host of other technical aspects of personnel management. Each expert is backed by his or her own body of rules and precedents. Each is as effective as his or her ability to access the correct rule for the situation at hand and knowledge of the manager's needs.

We have differentiated our rules smartly. Complex tasks have been subdivided, simplified and reduced to simple rules in pursuit of efficiency and fairness. But, as the most famous and devastating critic of the human costs of this approach points out, we removed discretion from the process. Karl Marx may yet turn out to be the hero of line managers!⁵

The sheer volume of rules causes many a line manager to plead, "Don't give me nine rules why I can't, find the one that says I can!" Personnel management rules play a pivotal role—sometimes enhancing, sometimes impeding effectiveness. We have so many rules it often appears "the system" cannot be beaten. There always seems to be a rule somewhere to block every change effort.

Now, we are at the crux of things. How can we enhance quality, effectiveness and efficiency given today's complex and rapidly changing task environment if every supporting office has a "veto" if it chooses to invoke an obscure rule? For example, if the training manager did not project a class quota one year in advance, how can he or she react to an unforeseen need? There is no lack of ideas from line managers about how to enhance CPO rules. Of course, they are not held accountable to enforce the same rules by which the CPO must live.

President Jimmy Carter's Grace Commission certainly offered suggestions—over 8,000 suggestions. While the Grace Commission provided a valuable collection of discrete ideas on a broad variety of issues, it offered no effective overall plan of action—no strate-



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gy. It also failed to recognize that the people within the bureaucracy must be partners in the change process. It revealed a gross misunderstanding of the mechanics of bureaucratic change processes. Our plan must be broader than a suggestion program; it must address the federal government's corporate culture.

First, we must recognize that our arrangement today reflects a deliberate, if undocumented, strategy. Alfred D. Chandler Jr.'s 1962 threshold study of organizational structure concluded "structure follows strategy." Later, in 1978, Pfeffer observed that "organizational structures can be viewed as the outcome of a contest for control and influence occurring within organizations." For good reasons, our assumed strategy valued stability over risk. As we adopt a strategy that supports change, however, there is risk, and we will confront many still caught in the old strategy.

Second, we must recognize the central role personnel management policy itself plays in our strategy. Where our strategy was to promote predictability, we now need to adopt a strategy encouraging flexibility. This means developing new norms of behavior—a new corporate culture. Behavioral change cannot occur without explicit effort to reeducate people to adopt new values and norms. Personnel management policy governs who gets trained and how. Therefore, the CPO is an ideal place to spawn new policies and experiment with corporate cultural values.

Under the old strategy, we evolved structures that promote people based on increased span of control, that reward compliance with precedent, that protect seniority and that differentiate complex tasks. All impede rapid change. Separately understandable, even defensible, these structures must now come to grips with the future

The Grace Commission provided a valuable collection of discrete ideas on a broad variety of issues, it offered no effective overall plan of action—no strategy. It also failed to recognize that the people within the bureaucracy must be partners in the change process. It revealed a gross misunderstanding of the mechanics of bureaucratic change processes.

shock Alvin Toffler predicted 20 years ago. Our strategy must move beyond bureaucracy toward "ad hocracy" to keep pace with our rapidly changing environment. We must quickly learn new skills and ways of organizing work. Are we not more highly educated, self-directed and more flexible than ever before?

Of course. Our schools and families have adjusted well to the rapid increase in the rate at which change has occurred in the 1990s. We did not shy away from the information explosion, we brought computer technology into our homes. We no longer cling to risk-free security, we take risks to enrich our lives. In Tom Peter's book, *In Search of Excellence*, we have compiled a compendium of how other organizations have adapted. A survival manual for the 1990s is also well outlined by his follow—on book, *Thriving On Chaos*. Both should be required reading by every CPO. Insiders know that our best bureaucrats constantly search for and find ways to do things better. Why not legitimize the way they work around rules, when rules get in the way of progress?

Our strategy is taking form. We know that we must coordinate our efforts to combat the oppression of too many rules and precedents. We know we must plan and implement ways to restore discretion to the person closest to the problem. We know excessive differentiation of support risks confusing or impeding line personnel. We know that how we do business within the CPO influences policies governing how the entire organization operates.

If we agree that organizational change is called for to keep pace with the world around us and that only "we" (teamwork) can make lasting changes, then we are well on the way to a solution. We need only act. All action starts with a vision. ¹² Any action that fails to consider the diverse visions held by competing coalitions of power is doomed. The overarching vision of where we are going must incorporate every stakeholder's view, or no meaningful change can occur within the bureaucracy. Remember, stakeholders can veto action by withholding support or invoking precedent. The first element of our action (strategic) plan must be to develop a commonly held vision of the future of our organization.

Like the US House of Representatives (an organization whose rules threaten to exceed those of the civil service in sheer volume and complexity), we must adopt a strategy that, when necessary, allows us to rapidly change our rules. Our strategy must also, as Peter F. Drucker advises, consider the "futurity of decision making". We can only change the future, recognizing that decisions in the past have led to today's decision—making circumstances. We must, therefore, plan ahead to identify and change rules—we must avoid knee jerking. Our planning horizon must be synchronized with our vision.

Most strategies fail to be fully implemented unless developed by those most affected by them. ¹⁴ Let individuals own the solution to

a problem, and they tend to defend and implement their plan in spite of unforeseen difficulty. Again, treat people with respect and confidence, and they will tend to act responsibly. This is a critical element for success.

Our strategy is to identify the dominant coalition of leadership within the CPO, empower the members to implement reforms and task them to develop a commonly held vision of the future. As a host of organizational psychologists point out, the journey is the destination. That team will learn, as they promote, self-determination.

With today's technology, it is possible to incorporate a capitalistic component to encourage internal entrepreneurs. Once more demonstrating respect and confidence, let offices operate as profit centers, at least on paper. Transfer payments within the federal system already are used in places such as the Huntsville Division of the Corps of Engineers. Along with bimonthly paychecks, our computers could produce resource histographs. That simple tool alone would harness interdepartmental pressures to pull everyone along the path of efficiency, particularly if properly tied to promotion and bonuses. Although beyond the scope of this paper, "matrix" or shared employee/resource management is, today, not reserved for only highly innovative industries. It may be time to support our "ad hocracy" option with matrix management structures.

We expect bold experiments in technology to lead to major advances, but in matters of social organization, we are timid. ¹⁵ But can we afford to balk at daring innovation within the civil service system? As William L. Gore says, "It is commitment, not authority, that produces results." ¹⁶ Let us abandon hierarchy and authoritarian organization in favor of confidence in ourselves. Let us grow an "ad hocracy" within a prototype CPO and see what happens.

Futurist John Naisbitt's popular Megatrends described 10 trends transforming society as a whole: 17

- In the "information society," which is supplanting the "industrial society," knowledge and creativity are replacing capital as the strategic resource. The CPO is the only mine from which managers extract the increasing valuable resource of informed people.
- The baby boom is being replaced by the baby bust—competition for the best new employees is keen.
 - Middle management is being whittled away by technology.
- Innovation has sparked an entrepreneurial revolution that large organizations are scrambling to accommodate.
- Today's work force is younger, better educated and increasingly female.
- Women workers are etching their lifestyles on corporate policy to accommodate the reality of virtually all mothers pursuing careers out of the home.
- Flexibility, the use of intuition and sharing a "vision" to create new corporate structures and to rally support, is being seen

We must recognize that our arrangement today reflects a deliberate, if undocumented, strategy... [and that] the central role personnel management policy itself plays in our strategy.... Our strategy must move beyond bureaucracy toward "ad hocracy" to keep pace with our rapidly changing environment. We must quickly learn new skills and ways of organizing work.



Management boils down to the function of coordinating the work of others. That function certainly has new technological support, but even more significantly, we are better prepared and more motivated than ever to manage ourselves.

as vital to survival.

- The need for closer ties between business and our education system is creating an unprecedented alliance between organizations and schools.
- There is a rising concern over corporate health issues and quality of life on the job.
- Baby boomers now dominate corporate leadership and account for 54 percent of all workers—their values must be addressed.

Dare to Change

These trends will also influence how we manage our governmental departments. Management boils down to the function of coordinating the work of others. That function certainly has new technological support, but even more significantly, we are better prepared and more motivated than ever to manage ourselves. Here is our strategy for the 1990s:

Form a dominant coalition of senior managers to manage the transition period and develop a strategic plan. Fully involve stakeholders in a commonly held vision of the future through participative management techniques.

Invest in education. Conduct seminars and workshops on all aspects of the new vision, including desired behaviors, the transition process and corporate values.

Implement every possible idea to create a nourishing environment for personal growth. For example:

- Institute flexible hours through job sharing, flexitime and permanent part—time.
- Stimulate intellectual development with noon–hour lecture series, and so forth.
 - Award creative people with academic subbaticals.
 - Organize travel/learning experiences.

- Enrich jobs, stretch people to develop and integrate new skills through cross-training.
- Make the workplace a place where people come to grow instead of expecting them to meet their needs for growth elsewhere.
- Compensate so as to reward performance and innovation. Reinforce new corporate values/behaviors.
- Critical performance objectives that require innovation or "profit" can be developed for everyone. With the wealth of lessons learned elsewhere now available through better information management, measurable and specific performance objectives are well documented.
- Using a "profit center" yardstick, even if *pro forma*, allocate resources, at least in part, based on economic performance. Efficiencies should not be lost, but enjoyed by those who found ways to save. Bonuses could be tied to productivity.
- Employ "matrix" management. Offices should be able to hire contract labor or services across organizational boundaries on a competitive basis in order to keep internal suppliers on their toes.
- Network authority, since that is how decisions are often made anyway. Formalize the concept that everyone is a resource for everyone else. People are supported horizontally on the merit of their work, not strictly via the bureaucratic pyramid. Leadership can be shared within a group.
- Encourage internal entrepreneurs by giving them control over an entire venture. For example, let the recruitment office solicit any way they feel fills the need. Set aside rules, but define clear expectations and clear descriptions of desired results. Hold management accountable for results—not compliance to rules.
- Place quality above cost as a measure of success. The receptionist should be of the highest possible quality, for example, or we risk damaging the entire CPO's reputation with its "customers."
- Reward people who go with their intuition in complex situations. Complexity consumes time, and time can be critical. Support risk takers who succeed. Empower people to act without waiting to confirm precedent or rule compliance.

Our Army has paved the way as a case study of federal reform. As General Carl E. Vuono, former Army chief of staff, said:

"Quality does not come about by accident. It is the product of enlightened leaders who create a personal and professional environment in which each soldier, each civilian and each family member can achieve new heights of achievement and growth." 18

Were these concepts implemented, the following hypothetical civilian personnel office might become reality, as it has outside of federal government:

Pat is greeted, as she strides toward her office, with a volley of cheerful "How's the baby" greetings. It is 1000, and she moves with a purpose toward her centrally located desk. Since a friend lured Pat

We know that we must coordinate our efforts to combat the oppression of too many rules and precedents. We know we must plan and implement ways to restore discretion to the person closest to the problem. We know excessive differentiation of support risks confusing or impeding line personnel. We know that how we do business within the CPO influences policies governing how the entire organization operates.

back to civil service from Levi Strauss, she has contributed much. Jack, thinking of phased retirement, selected Pat to share the chief's position with him while she split her efforts between career and family. Jack insists they overlap on Wednesdays for at least 6 hours, since both are held fully accountable—there is no dividing line of responsibility. On the other hand, the office never has to go without leadership during vacations or in case of illness. The office gets two highly skilled, experienced and motivated managers for the price of one. Pat's computer screen is silently flashing amber. "Great," she thinks to herself, "no major crisis yet, but some important messages are demanding attention." She keys "agenda" as she shakes out her coat.

Her screen quickly fills with a calendar projecting the next seven days, hour by hour. She notices that except where she has reserved hours, today has been filled with meetings or people asking to get on her calendar. She glances at the message index, then screens down and electronically confirms most of today's and tomorrow's calendar, proposing better times for those appointments she bumps. "Maybe I can kill the need for those during the day," she thinks to herself. Throughout the computer network, similar screens are updated automatically.

Pat has 1 hour before the weekly staff meeting. She calls up the top-priority message while she brews some desk-side coffee. Clyde, a line manager over at the operations center, is desperate. He needs someone who knows how to size data base hardware and understands COBOL (common business-oriented languages). "If we can't get someone on board by next Thursday," the message wails, "I might as well forget it. The comptroller gave me until the end of the month to submit my cost estimate for the new command and control system, or wait a full year! Help!!"

Pat jots down a note, then scrolls through the rest of her electronic mail. Some notes are conveniently answered electrically. One in particular catches her eye. The new organization chart is causing problems at headquarters. The office administration manager decided not to use Pat's concept. He will just update last year's chart—but he needs information from Pat. Pat fumes, "Who supports whom!"

Pat does some management by wandering around, then joins the assembled group for the weekly staff meeting. She deliberately takes a nondominant seat at the table. No protocol here, just business. She muses at how uncomfortable she felt at the executive seminar she attended last year.

She is grateful now to have learned that the most powerful form of leadership is invisible. Her surviving crew are all top rate. They defer to expertise—not position power. Nonperformers were quickly identified under the new management information system that tied efficiency and effectiveness to individual performance. Those who could not adapt to her high standards were released. Before

Any action that fails to consider the diverse visions held by competing coalitions of power is doomed... Stakeholders can veto action by withholding support or invoking precedent. The first element of our action (strategic) plan must be to develop a commonly held vision of the future of our organization.

long, word spread of how bonuses were paid and rapid promotions could be achieved—if you were good enough. Ambitious and talented young people flocked to work on this team.

Bob, a position classification expert, has the floor. He is also the recorder for a focus group that met yesterday afternoon to explore ways to improve service. The focus group was dominated by line managers, and Bob has already distributed a memo

capturing key points.

"On the positive side," he starts, "Kathy is seen as a real hero, always polite and very knowledgeable. She even returns calls on behalf of all of us to keep customers informed." Kathy, the receptionist, takes pride in keeping our public face smiling, Pat notes in her "brain book." Later, Pat will ensure Kathy is appropriately recognized. Pat knows quality is best evaluated from the customer's perspective.

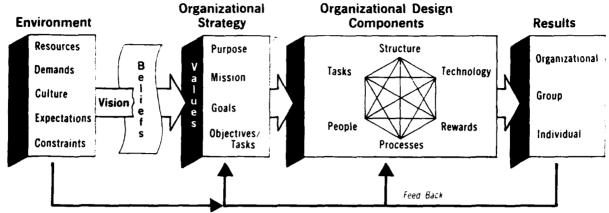
"On the other hand," Bob continues, "many of our line managers feel we are not proactive enough. I did not try to argue them out of that view, I just listened. I think what they were really trying to say is that they are expected to stay under budget and on time for various projects, but we cannot seem to advertise positions fast enough. As a result, we send them candidates too late to become effective members of their project team."

John cuts in, "Is it advertising or the actual selection process? You know even after they interview and pick someone, it may take weeks to actually go to work." John is taking afternoon courses toward his degree in personnel management and, although junior in age and working in the typing pool, he has made a very good point. "As I understand it," he continues, "the reason for delay is that accounting has a rule that you can only go to work on bimonthly paydays or it messes up payroll. That seems silly to me. Can't we write a computer routine or simply plug in hours actually worked or something else to expedite going to work? I take classes with a guy who said they do that for city jobs."

Pat leans back and marvels at the creativity of people within the office. Before the meeting is over, eight solid suggestions are refined and tasked out for action—mostly to volunteers following up their own suggestions. "John likes working with computers," Pat records for later use.

Pat tabled her need to find someone who knows COBOL and data base management fast. She knows that the normal route of advertising for the job will not help the frantic line manager, Clyde, in the operations center. Everyone took note, and there was some discussion about problems with procedure. Pat summed it up by saying "Look, people. We have one primary purpose—to staff this organization with quality personnel. I have waiver authority but, since I am accountable to my boss not to abuse it, we will find a way without waiving rules—if possible. However my bottom line—we will fill the requirement, today if possible."

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Strategic Management Model

The model . . . [allows one to] expand on any management issue her boss may raise from how we build a strategy based on our organizational values and beliefs, how we derive our vision and strategy to how we measure results and tie individual results to our overarching organizational mission. The design components block is particularly useful to show relationships between key components during a transition period.

After the staff meeting, Pat returned to her office. The refusal of the headquarters administrative officer to publish her organization chart in any other way than the standard bureaucratic pyramid was eating away at her. "Don't these people understand," she thought out loud, "they can destroy everything we are working so hard to build, just because that's how we always do it."

She figured it is time to begin to manage her boss. She and Jack will just have to take a stand and be a little unreasonable up the line. But they had better be able to communicate. She decided to build a model.

Integrating everything she has read or experienced about organizations and realizing models are abstract guides to intuition, she develops the model as shown here.

She can now expand on any management issue her boss may raise from how we build a strategy based on our organizational values and beliefs, how we derive our vision and strategy to how we measure results and tie individual results to our overarching organizational mission. The design components block is particularly useful to show relationships between key components during a transition period.

Pat will point out how changes in structures affect the status quo balance between other components, and vice versa. Her organization chart should reflect relationships as they are, not reinforce the old hierarchy pyramid.

John, who job shares a position with one of the people at the staff meeting from recruitment and placement, phones in from the community college where he is enrolled in a class on distributed data bases. He has just met someone who meets Clyde's position description and felt Joan should follow up with an appointment to interview later today. Pat thanks him for the prompt action and phones Clyde. He cannot believe the quick action and pledges eternal gratitude. "Sure, anytime," Pat laughs and turns back to other opportunities to contribute.

This hypothetical office reflects how some highly successful private enterprises currently function. Undoubtedly, it is within our

grasp. One question remains—when and how will it happen? How long will senior management treat symptoms before the underlying disease is discovered and cured? How long can we expect good people to suffer under obsolescent management structures before we are forced to take drastic action? Why not start today to:

- Demand quality.
- Treat people with trust and respect.
- Challenge precedent.
- Dominate rules.
- Communicate a common vision for the future.

Why not identify one CPO as a prototype and initiate a strategic management program to reproduce Pat's results? Starting with personnel management and administration, let us commit ourselves to returning discretion to people and accountability to management. Why not? MR

NOTES

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PERSPECTIVE ON MOBILIZATION

Expanding to a Larger Force

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Lieutenant Colonel Thomas R. Rozman, US Army

















During the Gulf War, numerous Reserve Component (RC) units were activated, trained and deployed to Saudi Arabia. The author looks at the postmobilization training requirements of RC combat organizations. He questions who will do this future mobilization training as the Total Force is reduced and suggests some possibilities for meeting these requirements. Finally, he urges that a close review of this issue be made now to determine the requirements for the future.

on a significantly smaller Army by 1995. Delays and possible lessons learned from the recent Southwest Asia experience notwithstanding, an Active force of 535,000 and possibly less may be expected. If this smaller force is a given, how would the Army expand to force levels required by post—World War II emergencies such as Korea, Vietnam and Southwest Asia?

The quick answer is to generate the additional force structure from the Reserve Component (RCs). This makes sense, particularly for combat service support and combat support units where

many individual and collective skills of soldiers and units are quickly adapted to the active duty situation. Critical medical skills are sufficiently current and trained to such levels of competency in the Reserve peacetime environment that little additional train—up is required to apply these skills on 24—hour—a—day active military duty. However, the answer is not as easy for the combat arms because high levels of individual and small—group competency (crew and squad) are not all that must be achieved. Successful maneuver requires the collective application of all of these skilled individuals and small groups as units.

Experience from operations *Desert Shield* and *Desert Storm* indicates that rapid integration of Reserve maneuver formations with the Active force for combat employment in less than 60 days

The views expressed in this article are those of the author and do not purport to reflect the position of the Department of the Army, the Department of Defense or any other government office or agency.—Editor

was not realistic. The reason was rooted in the requirement to be individually and collectively (crew and squad to brigade) competent, as well as practiced in the achievement of maneuver synergy. As it turned out, the building of such collective maneuver competency into a formation that is limited to 39 duty days a year (spread over numerous two-day periods and one 15-day session annually) took approximately 90 days. More tellingly, a significant number of Active Army personnel were dedicated to this postmobilization effort as "trainers" (roughly 1,000 to 2,000 per brigade). With the smaller force suggested, consideration of another situation requiring Active forces of approximately 1 million or more invites the question, "Where will the trainers come from?" The initial force deployments will absorb most of this smaller Active force. A smaller organized and equipped Reserve will add to the trainer requirement because trainers will have to be found for both mobilized Reserve maneuver units and newly formed maneuver units. Again, who will do the training? A very limited skilled trainer pool can be expected to exhaust itself within weeks of mobilization.

The training divisions, nine of which are currently organized in the US Army Reserve, might meet some of the need; however, the Fiscal Year 1995 force will reduce these assets along with the rest of the Total Force, and the function of these units may become more critical for new–soldier training to generate sufficient replacements for the expanding Army.

How can the Army plan against a worst case scenario, for example, a mobilization of the force to a million or more soldiers? Specifically, how can enough skilled maneuver trainers be provided to support training assistance to mobilized Reserve maneuver units and to newly formed units? This article examines that issue and proposes *several* possible approaches.

Shortage of Mobilization Trainers

Over the last decade, the Army has made some assumptions on the adequacy of its trainer pool. The idea has been that there are enough. When you really get "strapped," you call in the Individual Ready Reserve (IRR), retirees, and so forth. Theoretically, all of these personnel, once back on active duty, will be at least minimally qualified to serve as trainers.

This idea is derived from the myth that once a soldier has been a squad leader or platoon– level leader, he is henceforth a trainer. The limitations on how far the myth carries in reality

The experience seems to say that to train soldiers and units how to fight at the point of the spear (where complex and hard-to-achieve synergy is a must), the pool of competent trainers on mobilization is small. In the case of the Desert Shield mobilization, the Army had the luxury of the NTC's trainers, two nondeployed heavy divisions and the cadre of the US Army Training and Doctrine Command (TRADOC) already undermanned schools.

have only recently been exposed. Two experiences are key. First is the growing awareness, through the experience of observer/controllers (OCs) at the combat training centers (CTCs), of what it truly means to be an effective maneuver trainer. OCs at the National Training Center (NTC), Fort Irwin, California, have become the elite among the Army's armored force trainers (armor and mechanized units). They have provided a new definition for the term "trainer." Among themselves, they have also discovered the fact that there are very few expert practitioners of the training art. They have learned, through the unique and extensive experience of the CTCs where they accompany platoons, companies, battalions and their staffs on mock battle after mock battle, how limited even they are as trainers.

Second, when the Army mobilized three National Guard armored and mechanized brigades for *Desert Shield*, well over 6,000 Active Army officers, noncommissioned officers and soldiers were dedicated to supporting these brigades (in



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addition to personnel from the Continental US armies [CONUSA] and readiness regions, the entire OC staff at the NTC and much of the post and opposing forces, as well as two brigades from the 4th and 5th Infantry divisions [Mechanized]). This OC requirement brought into question the efficacy of Reserve trainer competence immediately upon mobilization.³

The experience seems to say that to train soldiers and units how to fight at the point of the spear (where complex and hard—to—achieve synergy is a must), the pool of competent trainers on mobilization is small. In the case of the *Desert Shield* mobilization, the Army had the luxury of the NTC's trainers, two nondeployed heavy divisions and the cadre of the US Army Training and Doctrine Command (TRADOC) already undermanned schools. Even so, supporting the trainer requirement for just three Reserve heavy brigades quickly diminished this pool. It goes without saying that for an Active force of

535,000 or less instead of 750,000 (+), the challenge will be logarithmically rather than mathematically greater to produce forces trained to standard at the same force levels of the winter of 1990–1991.

But wait you say? What about the assets of the CONUSA and its readiness commands and TRA-DOC? As it turned out, just preserving the replacement training infrastructure and meeting the mobilization responsibilities and tasks of these commands, while at the same time filling out deploying Active force structure, was a major undertaking. This quickly thinned the officer and enlisted ranks of the CONUSAs and TRADOC. Had both been smaller to start with,

major missions would not have been met for lack of personnel.

At this point, the use of IRRs and retirees to augment these staffs must be considered. Certainly, in a more extensive and prolonged situation, these soldiers would fill out the infrastructure jobs, releasing active duty soldiers for more critical roles. However, in the best of situations, even if the reservists and retirees were current and practiced in their assignments, there would be lapses in efficiency. Further, given a smaller base of trained soldiers, Active and Reserve, this replacement pool will become much smaller. It will probably become too small.

The apparent issue is, "How does the Army, on a significantly smaller base, produce the necessary levels of competent trainers to render training support like that found necessary during *Desert Shield?*" If the discussion only orients on the armored element of the projected 1995 force, assuming a be—prepared Army mission to project

force to the magnitude of Desert Shield and Desert Storm with similar time lines, the Army will not be able to meet the requirement. The same objectives and results achieved in 1990–1991 could be managed in the projected force base only if all heavy force, experienced Active soldiers not assigned to heavy force units were stripped out of infrastructure and light force assignments. Further, it would require recently retired heavy force soldiers to be brought back to active duty. Success would almost demand "a one for one" level of competency between Active and Reserve heavy force soldiers.

The last point was shown, by Desert Shield experience, to be unattainable on the basis of current Reserve training strategies of 39 days a year. In this light, what can be done to mitigate a smaller force structure's impact on future major heavy force expansion and projection requirements, assuming the Army has not seen the end of multicorps deployments of armored force? (The Gulf War used the 1st and 3d Armored divisions, 1st Cavalry Division, 1st and 24th Infantry divisions [Mechanized], 197th Separate Infantry Brigade [Mechanized], 2d and 3d Armored Cavalry regiments [ACRs] and armored formations of the 2d Armored Division and 3d and 8th Infantry divisions [Mechanized] that equalled several brigades.)⁶ The essential ingredient to success, as pointed out, will be the effectiveness of the available (and qualified) armored force trainers the Army can mobilize at the time of need.

Mobilizing the Trainer Base

The preceding discussion established that with a smaller Total Army base, the Army will have a difficult time fielding an armored force of the quality, quantity and in the time that it produced the *Desert Shield* and *Desert Storm* force. Certainly, employment of new training technologies and greater efficiency in the training system can help soften the effects of a reduced resource base. However, nothing can fully compensate for sufficient numbers of seasoned, expert trainers. This is particularly true for the training of armored force soldiers and units. The issue be-

comes one of how to minimize the damage a smaller force has on producing greater required levels of "competent force" for an emergency.

In [an] extensive and prolonged situation, [IRRs and retirees] would fill out the infrastructure jobs, releasing active duty soldiers for more critical roles. However, in the best of situations, even if [they] were current and practiced in their assignments, there would be lapses in efficiency. Further, given a smaller base of trained soldiers, Active and Reserve, this replacement pool will become much smaller. It will probably become too small.

The smaller projected force virtually mandates the following for building an Active armored force to the level of the recent Southwest Asia experience:

- More time to produce a force of the same quality.
- Fielding the same size force sooner but as a less competent force.⁸

This assumes that to meet any time line, the Army will have to use all armored force modification table of organization and equipment (MTOE) units in the Active force. This means that there will be no strategic reserve as there was, with the August 1990 to February 1991 mobilization, such as 4th and 5th Infantry divisions (Mechanized) in the Continental United States and the 3d and 8th Infantry divisions (Mechanized) in Europe (already reduced to support operations in Saudi Arabia and Kuwait). This reserve (more than half of which was forward deployed in Europe), if operations in Kuwait and Iraq had encountered a more proficient and determined force, might have been hard-pressed to sustain deployed force levels. It certainly would have been inadequate if another simultaneous situation requiring armored force had developed. This further means that the immediately available "seasoned" armored force individual

and unit replacement or rotation base will not exist with the 535,000–soldier force if it maintains relatively proportional armored, light and special operations forces (SOF) components.

It cannot be assumed that there is a proportional relationship of functions to results. A scaling down of all armored force organizational,

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leader, training and materiel functions proportionally cannot be expected to support, in reverse, an effective rapid expansion when required. The leader function alone is difficult to quantify. Its impact, particularly in an expansion of the force, makes as noted earlier, a logarithmic contribution as opposed to an arithmetic one.9 Though all three force elements (armored, light and SOF) require similarly high levels of proficiency to address increasingly tough tactical environments, the armored force, as has been true of the mounted arm throughout history, is particularly vulnerable to lack of expert leader/trainers. The previously noted dependence of this arm on the synergy of many individual and collective tasks and skill proficiencies to be effective on the battlefield, underscores this point. Two factors have made achievement of armored force synergy increasingly challenging. These are timedistance and massive firepower dynamics. Their impact on mounted operations has been accelerating as new systems (tanks and other weapons) make quantum leaps in capability. 10

Imparting mastery of this last essential skill of synergy to the armored force at all levels is the most difficult challenge to the Army's training mechanism during a force expansion. To succeed, the vital trainer element must be available in sufficient quantity.

In this light, what are the possibilities for mobilizing the trainer base to effect a rapid enlargement of the armored force? Recall what was said about the smaller projected force not being able to provide the quantity and quality of force in the same time as was done in the Iraq War. While technology will help, it will not resolve all of the issues. Let us examine some promising technologies before considering approaches to the trainer base.

The obvious value of the organized Reserves is the theoretical time saved in a mobilization by their existence as manned and equipped units with some level of training. For reasons mentioned earlier, this is becoming a tougher challenge with armored forces, particularly as capabilities of new equipment with new technologies accelerate the synergy effects. The mobilization for the Gulf War illustrated the need to review premobilization Reserve unit training strategies and training evaluation to assure that on mobilization, the Army has a "known quantity" starting point for these units (and the individuals in them) to allow more effective postmobilization training.

Much of the challenge of achieving more effective levels of Reserve unit premobilization training derives from the 39 available duty days, the skill of Reserve leader/trainers in the premobilization environment and access to training environments that optimize task and skill training to standard. Currently, mastering many of the critical synergy skills of armored force is dependent on traditional unit maneuver and service gunnery. This training environment, in short supply to most Reserve units, is one that, if resource availability in a smaller force remains about proportionally the same, will not increase in availability since it is based on three expensive consumable training resources—POL (petroleum, oils, and lubricants), spare parts and am-



It cannot be assumed that there is a proportional relationship of functions to results. A scaling down of all armored force organizational, leader, training and materiel functions proportionally cannot be expected to support, in reverse, an effective rapid expansion when required. The leader function alone is difficult to quantify. . . . Imparting mastery of this last essential skill of synergy to the armored force at all levels is the most difficult challenge to the Army's training mechanism during a force expansion. To succeed, the vital trainer element must be available in sufficient quantity.

munition. Even if available in greater quantity to the Reserves, optimal use would be compromised by Reserve unit available time (the 39 days are too spread out, the longest consecutive period being two weeks) and the divided focus of Reserve leader/trainers—civilian occupation versus part—time military career. Regarding this latter point, it is obvious, and unfair to expect otherwise, that these dedicated part—time professionals cannot be expected to master the levels of the armored force leader/trainer art aspired to by their active duty counterparts.

Technology has been providing some possible solutions, emerging primarily in the area of precision laser gunnery and interactive simulations.¹¹ The Army has already experienced these capabilities for several years with a number

of systems. One is the Multiple Integrated Laser Engagement System (MILES), which allows maneuvering units to actually shoot at each other in mock battle and register hits without use of actual fire. Another is the conduct of fire trainer (COFT), which allows the gunner and tank commander (TC) of a tank (there is also one for the infantry fighting vehicle) to engage dynamic target vehicles on digitized (computerized) terrain, operating out of an exact replica of the interior of their vehicle's fighting compartment. When the gunner and TC look through the sight of the COFT, they see an image very similar to the one they observe from their actual vehicle. If they fail to engage the targets to standard, the targets "shoot back" and "destroy" them. A third is simulation networking (SIMNET), which

extends aspects of the COFT idea; for example, the reproduced interior of the fighting vehicle and interactive computer simulations where the crew operates on dynamic digitized terrain but

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now with the entire crew and with the rest of the platoon's vehicles. The system is able to maneuver forces at least up to company and possibly battalion size. The Close Combat Tactical Trainer (CCTT) is the Army's maneuver simulation planned for introduction to the field around 1996. It will employ refined and more capable SIMNET technology.

These technologies in their early forms represent promising training environment alternatives for Active, as well as Reserve, units in training armored forces to standard. Certainly, the Army is only beginning the "learning curve" on the capabilities of these technologies. As they mature, the Army is challenged to determine how best to integrate them as training resources, allowing execution of training strategies to train the force to standard. However, it is unrealistic to expect these new capabilities, as powerful as they may be, to fully leverage the Army out of the time constraints faced by RC armored forces. At some point, to achieve armored force soldier confidence and competence, live maneuver and gunnery in equipment and on terrain are essential. This is particularly important if the Army is to capture as much of the synergy competence objective as possible.

Something that "rings through" loudly in the technology argument is, "Who facilitates the training?" or, "Who are the trainers?" Again, the Reserve leader/trainer can and must perform some of this task. But, are the machines going to be the experts? I doubt that "artificial intelligence" technologies will ever fully replace thinking humans. Nor do I believe that we want that to happen. Therefore, it is logical to assume that even with optimal integration of these expanding technology capabilities, expert leader/trainers, in quantity, are essential to success. Again, if we reduce all assets and functions proportionally to 535,000 active soldiers, will the Army have enough of these armored force leader/trainers to do the job? Probably not.

Leader/Trainers in a Smaller Army

This leads to several possible ways of doing business. The most important overarching point, before proceeding to what will otherwise be "Band-Aids" on a gaping wound, is that the ratio of Active leader/trainers in a significantly smaller force needs to be larger proportionately than in a larger force. To simply apply a calculus that says the number of privates in any force level must be at some magic "leader-to-led" ratio misses the point. That is, what is necessary from a leader/trainer resource standpoint to bring a significantly smaller force to greatly increased competent troop levels in quick time? The key thing to emphasize is that the leader/trainer component needs to be proportionally larger in tomorrow's smaller Active armored force.

This can be done several ways. The Army has a number of existing systems that offer a base from which to build, such as:

- CTC OC staffs.
- School staffs.
- Active training units.
- Readiness regions (and elements of CONUSA staffs).
- Reserve officer instructor group staffs (Reserve Officers' Training Corps [ROTC]).
- Active unit base (as a more efficiently planned leader/trainer developing ground in peacetime—may have to dispense with two—

year command tours).

- Students in the schools.
- Other Table of Distribution and Allowance (TDA) staff assets.

To some degree, these elements have deliberately or otherwise existed and functioned with an eye on mobilization by maintaining, in peacetime, larger bodies of mid- and senior-range leaders than required by the authorized number of privates. The result tends to be a competent and experienced leader "hedge" against expansion. Unfortunately, the budgeteers, often too numbers-oriented, drive the levels down strictly on the leader-to-led ratio argument. Though this oversimplifies the case and such reviews and reorganizations are needed to curtail burgeoning headquarters and unnecessary senior positions, we tend to "throw out the good with the bad," for example, the role these positions play in our country's ability to rapidly and effectively mobilize. For this reason, as time passes, the Army must clearly articulate the principle that the leader/trainer resource's importance to mobilization demands a higher active duty leaderto-led ratio.

The truth is that all of the elements listed have been developed for, or have been part of, past mobilization (Army expansion) plans. As such, what makes sense here is that

these same elements, in some form and in combination, represent the basis to any stated plan for developing, sustaining and expanding the Active core of armored force trainers against mobilization requirements. One old/new idea the Army is considering along these lines is the cadre division.

This is probably one of the better mechanisms for solving the problems of maximized leader/trainer pools with far fewer soldiers. Again, this



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does not say that it is better, or even as good as, what the Army had—a fully organized, equipped and trained Active division.

However, even the cadre division does not meet requirements for immediately available leader/trainers for activating Reserve armored force units (as was found to be necessary during *Desert Shield*) and for possible additional force structure beyond a smaller Active, cadre and organized Reserve force. This capability can only

be provided by careful organization and resourcing of the elements just listed in the future force.

A possible way of doing this might be to sustain CTC staffs at current levels and maintain school, readiness region, Active training unit

It is unrealistic to expect these new capabilities, as powerful as they may be, to fully leverage the Army out of the time constraints faced by RC armored forces. At some point, to achieve armored force soldier confidence and competence, live maneuver and gunnery in equipment and on terrain are essential. This is particularly important if the Army is to capture as much of the synergy competence objective as possible.

cadres and TRADOC staff at proportionately higher levels in the smaller force than are being sustained today. "Bill payers," if Active MTOE force structure is to be maintained at projected levels, will have to come from consolidation of schools, posts and stations, and moving ROTC more toward the off—campus Marine Corps model (the platoon leaders course).

Sustaining Competence

A critical issue in the Active leader/trainer pool is a clear statement of each element's role for leader/trainer requirements on mobilization. Specifically, how will leader/trainer competence be sustained and possibly even certified? Unquestionably, the leader/trainer pool outside of units, in order of expertise and availability, might arguably be as follows:

- CTC O/C Staffs.
- Readiness region staffs.
- Students recently reassigned from unit or OC assignments.
 - ROTC staff.
 - School staff.
 - Other TDA staff.

If the OC model is used as a guide for what the Army thinks of as leader/trainers, then the

issue is how to sustain leader/trainer proficiency in groups not assigned to CTCs or units. The answer may be to use augmentation temporary duty assignments to the CTC as "adjunct" OCs. (This idea has already been used with varying success due to less than deliberate Army emphasis.) In the order that the categories were listed earlier—readiness region staffs first—these groups would be best to least well suited to such a program. The basic assumption in this approach is that the armored force CTCs (the NTC and the Combat Maneuver Training Center [CMTC] at Hohenfels, Germany) are arguably the Army's finest existing armored force leader/trainer workshops and training grounds.

This last point suggests another approach. That is expanding OC staffs sufficiently to support regular leader/trainer cycles between unit rotations that operate similar to the Ranger school model, that is, groups of leader/trainers from the elements listed, deploying to the CTCs and reorganizing as battalions. They would then move through a shortened rotation with focus on refining leader/trainer skills.

Both approaches would sustain a larger, enhanced pool of Active leader/trainers. It goes without saying that a similar program might be applied to related Reserve assets of the maneuver area commands and training exercise detachments, as well as some IRR assets. However, as obvious as it may sound, we must remember that it will always be extremely difficult, if not impossible, to develop the same level of expertise in a part—time professional that can be developed in a full—time professional over a 20— to 30—year period.

Additionally, to enhance the pool of "master" leader/trainers, the Army may have to rethink this proportionally larger body of leader/trainers' access to troop—unit experience. If the MTOE unit base grows as small as is projected, the length of unit tours may have to be reviewed. Certainly, no one will argue with the benefits of commander stabilization; however, "a few great" leader/trainers as opposed to a "lot of effective" leader/trainers may be better for the nation. To

manage this result, several initiatives may be necessary such as:

- Shorter troop—unit tours.
- Consolidation of many Army organizations and functions on the same installations, (schools, development staffs, headquarters and troop units). This would allow freer movement of leader/trainers back and forth from staff to line without incurring costs of permanent change of station. To some extent, the "warfighting center" concept portends a combination of unit and schoolhouse on the same post. Use of various options of cadre units such as:
- Active combat unit cadres designed to absorb recruits, training and integrating them into the unit. 12
- Active cadres organized at battalion, brigade or division level that command and control peacetime training of lower-echelon Reserve units and become the formation head-quarters upon mobilization. These would be tactical MTOE headquarters and would, from time to time, command and control Active Component units during peacetime to enhance their readiness training.

In addition to these approaches, the Army might consider a reorientation of a number of current programs. An example might be tailoring the various full–time reservist plans to optimize development of leader/trainers in peacetime. This could be particularly lucrative if carried out in combination with some of the cadre alternatives.

One implied issue from all of this discussion is that in a coming era of competition for talent, for example, the quintessential warrior leader in the existing Active unit (or the best we have) getting the best may have to be reconsidered. Initiatives, like the cadre unit leader/trainers and the OCs to name two, may need to be a corps de elite, as well. It is possible that more imaginative assignment policies, particularly if some of the installation unit and function consolidations previously discussed occur, could make the executability of such an approach

The most important overarching point, before proceeding to what will otherwise be "Band-Aids" on a gaping wound, is that the ratio of Active leader/trainers in a significantly smaller force needs to be larger proportionately than in a larger force. To simply apply a calculus that says the number of privates in any force level must be at some magic "leader-to-led" ratio misses the point.

Even the cadre division does not meet requirements for immediately available leader/trainers for activating Reserve armored force units (as was found to be necessary during Desert Shield). . . . This capability can only be provided by careful organization and resourcing of the elements . . . in the future force.

more manageable. However, this competition for skill and talent will be a perpetual balancing act, as it always has been.

Development of these options or portions of them offer possible solutions to mobilizing a sufficient leader/training base when needed. They focus primarily on premobilization peacetime initiatives. Some of the same elements may continue to function as leader/trainer development systems postmobilization, that is, use of the CTC staffs and possible adaptation of school and readiness region functions to expand the CTC capability.

The Future

The proposed smaller force of 1995 and beyond, approximately 535,000 or fewer Active soldiers, has a significant leader/trainer impact on mobilization. This is particularly true for the armored force where achieving a high level of battlefield synergy is vital due to the dynamics and lethality of the armored force battlefield, now and tomorrow.

It is possible that more imaginativeassignment policies, particularly if some of the installation unit and function consolidations previously discussed occur, could make the executability of [a cadre] approach more manageable. However, this competition for skill and talent will be a perpetual balancing act, as it always has been.

The ability of the Army of tomorrow to quickly expand its armored force with trained-tostandard units and soldiers (535,000) to levels approaching that achieved recently for Southwest Asia in the same amount of time may not

be possible. However, careful assessment and deliberate preplanning of how the vital armored force leader/trainer corps will be developed and sustained through time may mitigate the effects of reduced resources on future armored force mobilizations.

As noted, the armored force leader/trainer may be needed in larger proportional quantity in this smaller force than exists today. Careful assessment, now, of possible requirements (the recent National Guard mobilizations may give the Army some indications) and development of a plan to assure this asset may mean the difference between an armored force mobilized and projected to a theater too late and not competent. and one that gets there on time and is already trained to standard. MR

NOTES

1. This determination developed from an informal examination, conducted by

1. This determination developed morn an immornal examination, conducted by the author, of the mobilization of the 48th, 155th and 256th National Guard brigades activated in November and December 1990.

2. For this discussion, trainers' may be defined as soldiers (typically officers and noncommissioned officers) who are sufficiently skilled in the craft of training that they are able to execute the simplest to most complex training objective (task to be trained; conditions under which it will be trained; and the standard to be trained, continuous union militar it will be trained, and the standard to be trained to and evaluated against). They have the capacity to execute multiple training objectives (multiochelon training) and rapidly plan and execute follow—on training objectives. Their experience is such that they are able to provide soldiers being trained essential feedback on performance at the right time. Their vast exposure to the cause and effect of executing a training objective effectively makes them masters at assessing progress and knowing when to let soldiers learn by expenence, or to reorient the progress of training to best effect.

3. See footnote 1.

4. Ibid.

ibid.
 bid.
 MG Thomas C. Foley, 'Commander's Hatch," Armor (January–February

Numerous articles address aspects of "leveraging" technology to achieve more cost-effective armored force training in tomorrow's constrained environmore cost-enective armored force training in tornorrow's constrained environment. Two that provide some background to issues and developments are: Retired MG R. J. Sunell and MAJ T. R. Rozman, "Future Training With the Armored Family of Vehicles," Proceedings of the Interservice/Industry Training Systems Conference (9th), American Defense Preparedness Association, November-December 1987, 519–21; and LTC Thomas R. Rozman and LTC Edward E. December 1987, 519–21: and LTC Thomas R. Rozman and LTC Edward E. Blarkenhagen. "A Training Concept for Heavy Forces Modernization." *Military Review* (June 1990): 50–57. Also worth citing is substantial developmental work (circa late 1989 and early 1990) by COL L. M. "Mac' Johnson and LTC Thomas R. Rozman, responding to guidance from GEN J. W. Foss, commander, US Army Training and Doctrine Command (TRADOC), and MG C. A. Hagan, deputy chief of staff for Training, TRADOC, and BG D. P. Malcor, assistant deputy chief of staff for Training Operations, that addressed the role of an Army Combined Arms Training Strategy in determining how the Army trains to standard and how it obtains the essential training resources necessary to execute the "strategy" through time. Early ideas that emerged through this work have been more thoroughly developed by the Army and are now captured in the Army's combined arms training strategy. combined arms training strategy.
8. This point, as policy, is not new to our national experience, see LTC Thomas

R. Rozman and LTC William A. Saunders, "The Expansible Army," Military Review (November 1990):30–39. A particularly illuminating examination in relatively modern terms of where the country has been on this issue is the force fielded in the Philippines in 1941–1942 (two Army corps of one US Regular Army division (the Philippine Division) and eight Philippine army divisions). See Duane Shuttz's Hero of Bataan (St. Martin's Press, 1981), 84–311, (an autobiography of LTG J. M. Wainwright) for an excellent, if emotional, discussion of a force fielded and embattled by the country along such policy lines. Certainly, in mitigation, it could be argued that the Philippines were being prepared for independence. National military policy, exclusive of the independence suse, had never intended to engage a substantial modern opponent on a Philippine battle-field in early 1942. Unfortunately, the world was a dangerous place, and the enemy did not cooperate with our intentions. Hopefully, we have not forcotten the emy did not cooperate with our intentions. Hopefully, we have not forgotten the lesson.

esson.

9. Substantial material has been developed from World War I. World War II and Korean War studies in this area not to mention work since. For a short capsule relative to the World War II experience, see Robert R. Palmer. Bell I. Wiley and William R. Keast's, US Army in World War II: The Army Ground Forces: The Procurement and Training of Ground Combat Tropos (Washington, DC: Historical Division, Combat Tropos (Washington, DC: The Franco Prussian War (New York: Dorset Press. 1991)) 224-56. Although consorting a was in an addition accord.

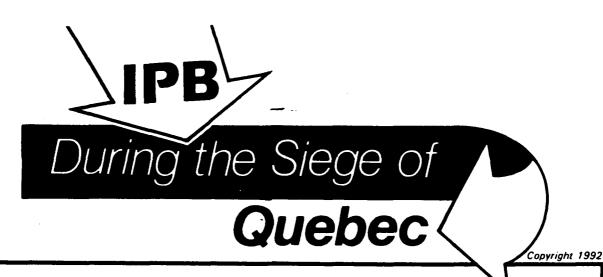
100. Worser no. 25 Ine Franco Frussian war (new trot. Dotset riess. 1990), 224-56. Although concerning a war in an earlier period, the discussion of mobilizing and training new armies in a relatively modern, technocratic environment, when the bulk of the standing trained army is deployed and unavailable, illustrates well the role of seasoned, competent professional leader/trainauro, inicial area well the role of season led, completent professional leader painters. His examination, on pages 244 and 245, of the issues of officership, when the majority of the officer corps is deployed or destroyed, reaches an important conclusion: "Yet however wide the net was spread, there was still not enough good material available. In the units formed towards the end of the war comlaints were constant of the idleness, cowardice and indifference of the regime tal officers, which was reflected in the gradual deterioration of disophine, and of the inefficiency of the staff, Inaccurate calculation of march-tables, faulty railway administration, faulture in the supply services, all were to increase the miseries, and reduce the fighting effectiveness of the Armies of National Defense.

way administration, nature in the supply services, an were to increase the instruction and reduce the fighting effectiveness of the Armies of National Defense.

11. Sunell and Rozman, "Future Training With the Armored Family of Vehicles," and Blankenhagen and Rozman, Military Review (June 1990).

12. This concept was most recently reintroduced by a Department of the Army. study report that is now being examined more intensely by the Combat Arms Center at Fort Leavenworth, Kansas.

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Major Samuel C. Endicott, US Army, and Lieutenant Colonel Thomas L. Sickinger, US Army, Retired

The intelligence preparation of the battlefield is a five-part process that analyzes the battlefield area, terrain, weather and enemy doctrine, and then integrates the information so that a commander can use the terrain as a combat multiplier. The author uses the Battle of Quebec from the French and Indian War to examine the extent to which the generals used the process. Would the process, if used as US Army doctrine suggests, support General Marquis de Montcalm's economy-of-force measure at the heights at Anse au Foulon to defend the citadel of Quebec?

AVING formed lines on the Plains of Abraham, the British infantry held its fire until the French line came within 40 meters. The battle for Quebec began at 1000 and was over by 1015. In those 15 minutes, the French empire in Canada fell under British control. British General James Wolfe, after directing a flawless battle, lay dying from three wounds. French General Marquis de Montcalm was mortally wounded while trying to rally his fleeing troops; he died the next morning at 0400.

Wolfe's capture of Quebec on 13 September 1759 highlights how surprise can be achieved by using an improbable avenue of approach. Both Wolfe and Montcalm analyzed the weather, enemy and terrain to gain or retain an advantage over the adversary. The steps are similar to the planning practice known as intelligence preparation of the battlefield (IPB).

Let us begin with an evaluation of the battle-field area (fig. 1). The Quebec area of operations (AO) was 40 kilometers long. Its widest area (Montmorency ford site) was 14 kilometers inland from the St. Lawrence River. The AO stretched from the northeast bank of the Montmorency Falls up the St. Lawrence River to Pointe—aux—Trembles. Three main terrain

features commanded consideration from Wolfe and Montcalm.

First, the St. Lawrence River splits the AO; near Pointe-aux-Trembles, it is over 4 kilometers wide. In front of Quebec (an Indian word meaning "narrow"), the river is only 1 kilometer wide. The St. Lawrence is divided just below Ouebec by the Island of Orleans. The river forms two channels as a result. The north channel is quite restrictive, and low tides reveal mud flats that narrow the river to only 500 meters between the island and the north shore. The south channel is much wider and afforded cover and concealment from French artillery and observation. Both Wolfe and Montcalm used the St. Lawrence as a line of communication: the French used the river to transport supplies from Montreal; the British, from England.

Second, the long, steep slopes along the north bank of the St. Lawrence River are formidable terrain features. These escarpments are 60–degree slopes. They were described by Wolfe in a dispatch to Prime Minister William Pitt as having "uncommon strength." The escarpments run from the Montmorency River's west bank all the way to the Cap Rouge River's east bank.

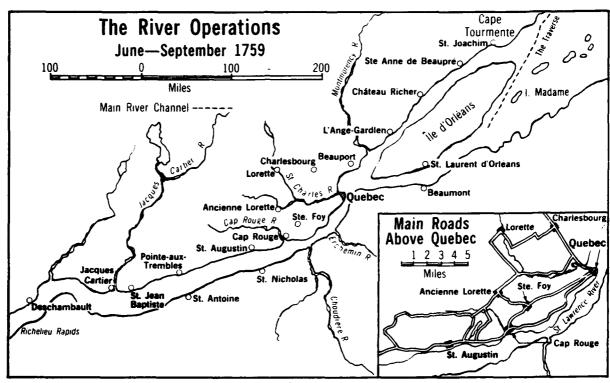


Figure 1

Third, three militarily significant tributaries flow into the St. Lawrence. These are the Montmorency River, the St. Charles River and the Cap Rouge River. Six miles downriver (northeast) from Quebec is the Montmorency River. This river flows from north to south through high foothills and contains numerous rapids. As it enters the St. Lawrence, the Montmorency River cascades over falls that prevent traffic from going up river. The St. Charles River flows northwest to southeast adjacent to the Ouebec citadel and presents a significant barrier to lateral movement between Beauport and Cap Rouge. The French had built a boat bridge to facilitate movement across the St. Charles River and constructed a boom across its mouth to block vessels from sailing upriver. The Cap Rouge River is 9 miles upriver in the direction of Montreal. The escarpments on its east bank and its strong rapids help reinforce this natural barrier to Quebec from the Pointe-aux-Trembles approach.

After the colonial rangers captured the Island of Orleans, the British established their base camp on the eastern shore of the Montmorency River adjacent to the St. Lawrence River. The powerful French artillery inside the citadel discouraged the British navy from attempting a run between the narrows during windless summer days. Montcalm's French regulars and Canadian provincials could see the 120 ships anchored in the south channel. Montcalm knew he must prevent Wolfe from landing his army in force.

The Terrain Analyzed

During these early days in June 1759, Wolfe and Montcalm recognized two avenues of approach from downriver. The most likely avenue of approach was an assault on the Beauport redoubts. Here Montcalm was blessed with formidable natural obstacles. The falls and rapids of the Montmorency River made an assault crossing practically out of the question. The French soldiers had constructed redoubts along the escarpments and the boom across the St. Charles River. The terrain favored the French defense along this avenue of approach. Surprise would certainly be difficult as Montcalm had total observation of all enemy movements, to include

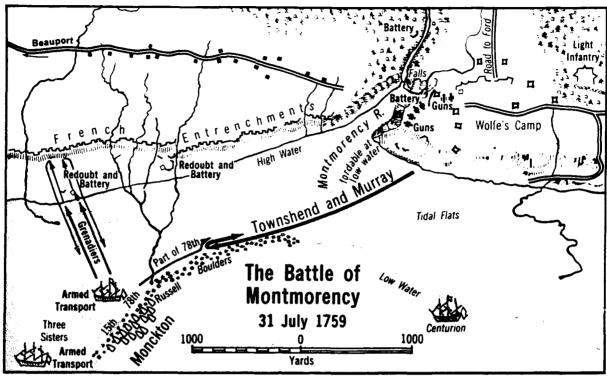


Figure 2

the Montmorency base camp, the Island of Orleans and Pointe Levi. The French could fire mobile artillery on an amphibious assault, and if Wolfe massed supporting naval gunfire, which would be canalized by the 500 meters of navigable river in the north channel, Montcalm's forces could easily see it.

The second possible avenue of approach included the Montmorency River ford site 14 kilometers upriver from its confluence with the St. Lawrence. This terrain also heavily favored the French. The ford site presented an approach not hindered by rapids, but Montcalm knew the British had no horses to drag their artillery to the ford and back down to Beauport. Both the east and west banks of the Montmorency River are quite hilly and heavily forested, denying the British the opportunity to mass their firepower for a European-style battle. Even if Wolfe could drag his cannons through the forest, he would be forced into a column formation that the French and Indians could easily attack. Concealment is much better than on the Beauport avenue of approach, but the Indians and Canadian provincials continuously patrolled the woods to prevent surprise. Montcalm's Indian allies would ambush any British reconnaissance element that ventured from the base camp. The generals also knew the British would be far from their logistics, necessitating a major effort to carry supplies with the forces. Additionally, with internal lines of communication and the advantage of horse–drawn artillery, Montcalm was better able to mass his firepower on the canalized British.

On 31 July, Wolfe attempted to send his light infantry across the mud flats in front of Beauport (fig. 2). The assault was poorly synchronized. The French easily repulsed the light infantry, which suffered 443 killed and wounded. Only a thunderstorm during the disengagement operation prevented the collapse from becoming a campaign—ending disaster. The deluge soaked the French gunpowder, allowing the British to disengage before they were annihilated.

In late August, the breezes on the river became brisk enough for the Royal Navy to attempt a dash through the narrows facing the

citadel. At night, and under a murderous bombardment from the citadel's batteries, the British sailed six warships upriver. They anchored near the mouth of the Cap Rouge River and presented a serious threat to the French right flank. This new development also opened up the possibility of two additional avenues of approach.

Wolfe designated three main
NAIs... He had to know whether
the La Guienne Regiment had returned
to the Plains of Abraham to defend the
escarpments. Fixing Vaudreuil's forces
at Beauport and Bougainville's at
Cap Rouge was critical to the success
of the plan. Wolfe may have placed
a decision point at the foot of the
heights at Anse au Foulon.

By surprising the French with a night
operation... Wolfe may have also
placed a target area of interest
on the Plains of Abraham.



The first of these additional avenues was adjacent to Pointe-aux-Trembles, a small town between Quebec and Montreal. As Montreal was the citadel's major resupply base, this line of communication was critical, and Wolfe instantly appreciated the possibility of severing it. The terrain initially favored the attacker, but then shifted to the French as the British moved northeast toward Quebec. A heavy forest, the Bois de Sillery, impeded observation between Cap Rouge and Quebec. For the British, this avenue of approach had the advantage of an unopposed landing. It also did not require surprise for success. For the French, the escarpments above the Cap Rouge River gave them excellent terrain for observing an approaching enemy from Pointeaux-Trembles and for defending. The soils in this area became bogs when wet, making it difficult to push artillery by hand. However, venturing as far as Pointe-aux-Trembles would place too much distance between Montcalm and his supplies, and a defeat would force him to

conduct a retrograde river crossing under fire.

The second possible avenue, Anse au Foulon, presented a chancy ascent up a 60-degree slope. This sharply rising ground gave the French an overwhelming advantage if they adequately defended it. The Anse au Foulon approach depended heavily on surprise. For the British to succeed, the French defenses had to be light. Immediately behind the heights overlooking the river was the flat terrain coveted by Wolfe. The heights were within striking distance of the French forces on Montcalm's right flank. Once at the top, the forest offered concealment until additional forces arrived.

Quebec's Climate

Military operations at Quebec depended on the weather. Weather-forecasting capabilities were limited, but the generals appreciated the four weather elements that affected their plans. Without a strong wind, Wolfe's naval forces could not force the narrows and threaten Montcalm's right flank. Therefore, strong winds favored British operations. Fog never became a decisive factor during the campaign, but it did conceal British river movements during the late summer mornings.

Rain assisted both generals that summer. As previously stated, the British averted a crushing defeat in the 31 July assault over the Montmorency mud flats when rain soaked the powder in the French muskets. However, rain normally favored the French. Heavy rains inhibited cross-country mobility by foot soldiers forced to push their artillery. Heavy rains also made the Montmorency and Cap Rouge rivers more difficult to cross. Rain also denied the mud flats to the British, making the Beauport avenue of approach impossible to use. A downpour forced Wolfe to cancel a planned 9 September landing at Pointe-aux-Trembles.

Finally, the approaching winter would also favor the French. Ice floes would trap the British fleet in the St. Lawrence River and make it impossible for resupply ships to get through. Wolfe knew he must finish the campaign by October or face defeat.

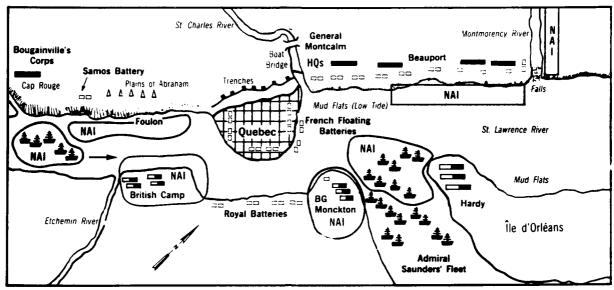


Figure 3. Montcalm's Event Template

The Opposing Forces

The British army was a homogeneous, veteran force. While the armies were equal in quantity, the British held the edge in quality. Wolfe had assembled an incredibly talented group of soldiers for the Quebec Campaign. Wolfe commented in a letter to his mother, "The Marquis de Montcalm is at the head of a great number of bad soldiers, and I am at the head of a small number of good ones." Discipline and competent leadership were pervasive throughout the British force. However, relations between Wolfe and his three brigadiers were strained by the stresses of war and differences over operations.

Wolfe was a student of warfare, a rarity in the days of political commissions. He was also intense, zealous, vain and very brave. Wolfe had demonstrated his personal bravery during an earlier battle against the French fortress at Louisbourg, Nova Scotia, and this surely instilled confidence in his soldiers. Finally, Pitt had selected Wolfe for this mission.

Montcalm had been a soldier since he was 15 years old. He, like Wolfe, was a student of warfare. Now 47 and a veteran of many battles against the British, he knew the British preferred an open battle, so he decided to avoid engaging the British unless they attempted a landing.

The French force comprised about 4,000 soldiers from the French regular army with combat

experience in the War of the Austrian Succession. The remaining 8,000 were Canadian provincials and Indians. Europeans favored line formations because they emphasized discipline and firepower. Montcalm felt that a provincial in the woods was worth three of Wolfe's soldiers, but he also believed that, in a European–style battle, one British soldier was worth three provincials.

Montcalm and Governor Pierre de Vaudreuil, who had ruled Canada for 11 years, were barely speaking over differences concerning laxness in punishing corruption. The disintegration of the provincials' ethics in the face of the siege disgusted Montcalm, and his sarcastic comments soon alienated Vaudreuil. However, Montcalm was a hero as a result of his splendid defense of Fort Ticonderoga earlier in the war. His abilities made Vaudreuil envious, which further widened the rift. Nonetheless, Montcalm had to confer with Vaudreuil before implementing major decisions concerning troop dispositions.

Montcalm reasoned that, because the British lacked mobile artillery, Wolfe needed a direct route to a battlefield. He also knew that the minor setback at the Montmorency mud flats would only make Wolfe more determined to mount a major attack on Quebec. On the morning of 13 September 1759, Montcalm paid the ultimate price for Quebec's fragmented command.

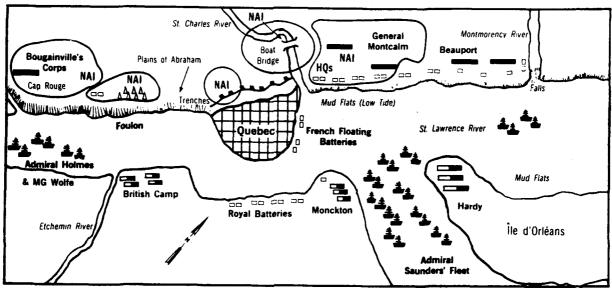


Figure 4. Wolfe's Event Template

Integrating Intelligence

During the early summer, the French concerned themselves with defending only the Beauport and Montmorency ford sites on the avenues of approach. On the Beauport approach, Montcalm concentrated his forces and kept constant surveillance on the named areas of interest (NAIs) of Wolfe's base camp and the fleet in the south channel (fig. 3). Meanwhile, one of Wolfe's key subordinates, Brigadier Robert Monckton, established a base camp on Pointe Levi to defend the batteries on the south shore that were bombarding the citadel. Before Wolfe could assault the Montmorency mud flats, he had to mass his widespread forces. Wolfe would need Monckton's troops for an attack.

Montcalm sent hundreds of Indian warriors and provincials to monitor the Montmorency ford. As a result, the French and British skirmished often during the summer in the woods on the northeast bank of the Montmorency River. For Wolfe to achieve surprise here would be difficult. For these reasons, the Montmorency ford site was not an attractive option for Wolfe.

The British fleet, commanded by Admiral Charles Saunders, contained enough assault boats to land a portion of Wolfe's force. Lowering these boats into the river and staging a troop load-up would indicate an impending attack. All this could be observed by Montcalm's sen-

tries using telescopes. No one needed an eyeglass to see the magnificent *Neptune*, a 90-gun ship of the line and Saunders' flagship, or any other warships moving into position to support with naval gunfire.

However, Montcalm's complacency was shaken when Admiral Charles Holmes, the British naval second in command, sailed six frigates past Quebec's batteries to Cap Rouge (fig. 4). Montcalm at once recognized that his right flank was seriously threatened. He countered by dispatching Count Louis de Bougainville and 2,000 soldiers to monitor Holmes' ships and defend the north shore from an assault. Bougainville could monitor both the base camp and British ships from his position atop the escarpments at Cap Rouge.

With this new development came the possibilities of two new approaches. The British could land anywhere on the north shore from Quebec to Pointe-aux-Trembles. Wolfe moved a portion of his force to exploit this new development, and the British established a base camp at the mouth of the Etchemin River opposite the Cap Rouge River.

Before the British forced their way past the citadel, both generals knew that there had been only one area suitable for an open, linear battle. That was the flat ground behind the escarpments stretching from Quebec through Beauport to the

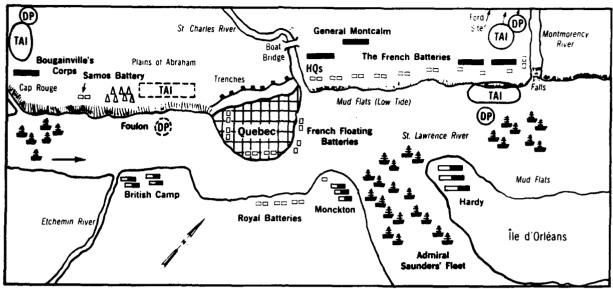


Figure 5. Montcalm's Decision Support Template

Montmorency River. Once the British successfully sailed past the French guns to anchor upriver near Cap Rouge, a second possibility presented itself. The Plains of Abraham was a plateau that lay in front of the citadel. To get to either potential battlefield required the British to scale steep slopes possibly manned by a French force of superior numbers. The provincials believed victory was possible if Montcalm could frustrate Wolfe from reaching those two areas. The French hoped for an early winter, which would soon close the river and force the British fleet to retire.

Wolfe designated three main NAIs at Beauport, Cap Rouge, and the Plains of Abraham. He had to know whether the La Guienne Regiment had returned to the Plains of Abraham to defend the escarpments. Fixing Vaudreuil's forces at Beauport and Bougainville's at Cap Rouge was critical to the success of the plan. Wolfe may have placed a decision point (DP) at the foot of the heights at Anse au Foulon. 4 By surprising the French with a night operation, Wolfe could land his force of 4,800 men and two cannons in three assault waves. Wolfe may have also placed a target area of interest (TAI) on the Plains of Abraham.⁵ It was there that Wolfe wanted to battle Montcalm. However, given early warning, Montcalm could overwhelm Wolfe with attacks from two directions.

Montcalm's aims were to check the British fleet, to deny the north shore to Wolfe above the citadel at Cap Rouge and to force the British to attack him at his strongest position, the Beauport redoubts. At Beauport, Montcalm had massed his forces to defend the shore. The mud flats were important as a TAI. The French expected Wolfe's assault at the Beauport-Montmorency mud flats (fig. 5). If the enemy moved toward the ford site, Montcalm must decide whether to shift mobile artillery to the north and whether to launch Indian raids on the east bank of the Montmorency River. However, if the attack came from upriver, Montcalm must shift the mobile artillery and troops over the boat bridge early enough to defeat the British before they could establish a beachhead.

Montcalm elected to send his respected La Guienne Regiment to guard the escarpments at Anse au Foulon. Two days later, Vaudreuil countermanded the order and had the unit return to his Beauport defensive lines. With that development, only Bougainville's corps and a company of infantry, commanded by Captain M. de Vergor, defended the north shore from Cap Rouge to Quebec (fig. 6).

Wolfe's goal was to win access to one of the two open areas adjacent to Quebec and force Montcalm into battle. Because the two sides were equal numerically, Wolfe had to discover a way

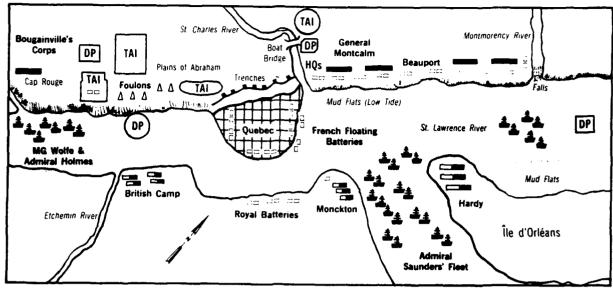


Figure 6. Wolfe's Decision Support Template

up the steep slopes and defeat the French before they massed their forces. On a reconnaissance following the canceled assault of 9 September, Wolfe observed the poorly defended plateau at Anse au Foulon. He believed that Colonel William Howe's light infantry could overwhelm the pickets commanded by Vergor, gain access to the plains and defeat Montcalm's main force before Bougainville arrived. It was a desperate plan devised by a desperate commander.

The Capture of Quebec

Whether due to the bickering or for reasons of operational security, Wolfe did not inform the brigadiers of his plan to attack at the Anse au Foulon until the day of the attack. The idea was only conceived after the 9 September cancellation of the assault at Pointe—aux—Trembles. The French believed the attack would occur at either Beauport or Pointe—aux—Trembles, but felt Beauport was more probable. British brigadiers Monckton, James Murray and George Townshend (each an able and brave leader) favored an unopposed landing at Pointe—aux—Trembles.

As commander of the pickets at Anse au Foulon, Vergor's mission was to monitor the St. Lawrence River for troop movements. This mission was complicated by a forest, the Bois de Sillery, that hindered communication with Bougain-ville's corps 8 kilometers away at Cap Rouge. Without Montcalm's knowledge, Vergor succumbed to the entreaties of his soldiers and released over half of his company to return to their

nearby farms to complete the harvest. On the night of 12 September, Vergor had only 40 sentries guarding the heights of Anse au Foulon. Confident an attack was not coming in his sector, Vergor went to bed early.

At 0130, Wolfe debarked from Holmes' flotilla and quietly floated 10 kilometers downriver. Wolfe, in the first assault wave, landed at the Anse au Foulon and sent Howe's 150 light infantrymen up the slopes to subdue Vergor's sentries. A quick battle followed because Howe caught most of Vergor's men asleep. Wolfe decided to proceed and sent the assault boats back for the next group as the first wave consolidated its position at the top of the slope. Meanwhile, Saunders (Wolfe's naval counterpart) began threatening movements in the south channel, moving toward Montmorency to draw Montcalm's attention to the Beauport approach. Montcalm was wary, but Vaudreuil took the bait. The governor was convinced the assault was coming at Beauport. Holmes, anchored off Cap Rouge, also feigned a landing that froze Bougainville's corps from moving against the Foulon foothold. Wolfe's deception efforts were completely successful, and he completed landing the third wave by 0530. Wolfe was about to have the linear battle he had desired for over three months.

At 0600, Montcalm rode over the St. Charles' boat bridge to view the situation on his right flank. He had heard skirmishing during the night, but he saw his worst fear develop before his eyes. Even in the morning twilight, Mont-

calm could see the British in their red uniforms forming into battle lines. The French general could not be sure of the size of Wolfe's force, and after a quick war council with Vaudreuil, Montcalm decided to attack before the British became stronger. The French believed they could not wait for Bougainville to arrive. Forfeiting a synchronized attack, Montcalm requested 25 horse-drawn artillery pieces from Vaudreuil to support his attack on Wolfe. Vaudreuil, on returning to the Beauport lines, observed Saunders' feint and parted with only three field pieces.

By 0800, the French had assembled 4,000 soldiers and three cannons on the southwest bank of the St. Charles River. They began firing their cannons at the British, and Montcalm's 2,000 Indians threatened Wolfe's left flank. Wolfe contained the Indian threat by employing Howe's light infantry and two battalions of American colonists to keep the snipers out of range of the main body. To reduce casualties from the French artillery, Wolfe ordered his soldiers to lie on the ground, load two balls in each musket and hold their fire until he gave the order.

At 0900, the two armies faced each other at 600 meters beyond musket range. Wolfe's forces were in a formation resembling an inverted U with Wolfe's right flank shielded by the St. Lawrence River. The majority of his force faced Montcalm. Wolfe ordered Webb's regiment to act as both a reserve and a rear guard. Wolfe paced the length of his lines and urged his soldiers to lie quietly.

Montcalm placed the Canadian provincials on his right flank where they and the Indians maintained harassing fires on Wolfe's troops. His left flank contained French regulars. The Royal Roussillon and La Guienne regiments anchored Montcalm's center. At 150 meters, Montcalm's soldiers began firing their muskets and rapidly advanced to close with the British. French officers scrambled to maintain control of their troops, who were screaming battle cries as they broke into a bayonet charge.

When the French and Canadian infantry came within 40 meters, Wolfe gave the order to fire. For several minutes, the smoke blinded the

combatants. Three musket balls struck Wolfe, and he fell. When the smoke cleared, 1,500 of Montcalm's force were dead or wounded. The French regulars began a total retreat into Quebec; the provincials could not hold and fell back

Because Montcalm conducted a credible IPB during the phase when the British were entirely below the citadel, he was able to deny Wolfe access to the Beauport plateaus through intelligent troop dispositions. . . . Having a force ratio of 1-to-1 and intimidating terrain to defend, the French might have frustrated the siege. If Montcalm had placed a DP and a TAI at Anse au Foulon, he could have synchronized his forces at Beauport and Cap Rouge. However, Montcalm attacked with a fraction of his force and was defeated.



as well. Montcalm attempted to rally his army, but was mortally wounded by grapeshot from Wolfe's small cannons. Vaudreuil and his troops could see the British success and fled downriver in panic. The floating batteries forced the British to break off the pursuit.

As the French army disintegrated, the British leadership had to contend with unimagined success. The Highlanders had drawn their broadswords to pursue the French to the boat bridge in an effort to prevent their escape. At that instant, Murray, Wolfe's second in command, was also wounded. Townshend, the third in command, faced a serious situation. The British army was temporarily out of control as it pursued the French. Townshend knew that, at any moment, Bougainville's corps might appear in the west. After a massive effort, Townshend regained control, reformed his lines and prepared to meet the new threat. Townshend placed Webb's regiment in the front lines because they were fresh. When Bougainville did appear, Townshend had no difficulty driving him from the field of battle. Bougainville withdrew to Montreal. Three days later, Quebec's Mayor de Ramezay surrendered to Townshend without further bloodshed.

Because Montcalm conducted a credible IPB during the phase when the British were entirely below the citadel, he was able to deny Wolfe access to the Beauport plateaus through intelligent troop dispositions. Montcalm later failed to recognize the Anse au Foulon as a potential avenue after Holmes sailed his small flotilla past Quebec to Cap Rouge. Because the Anse au Foulon approach was the least likely, Montcalm's economy-of-force effort to more heavily defend the Beauport and Pointe-aux-Trembles approaches was the correct one. However, the French failed to adequately defend the escarpments and had no apparent plan to synchronize widespread forces. Wolfe's gamble might have backfired had Montcalm orchestrated the contingencies to crush the vulnerable British scrambling up the slopes.

Having a force ratio of 1-to-1 and intimidating terrain to defend, the French might have frustrated the siege. If Montcalm had placed a DP and a TAI at Anse au Foulon, he could have synchronized his forces at Beauport and Cap Rouge. However, Montcalm attacked with a fraction of his force and was defeated. Montcalm probably had a plan to shift firepower within his

perimeter, but was unable to implement the plan due to his fragmented command, British deception efforts and emphasis on an outdated analysis. The French were convinced the attack would come on the most probable avenue of approach, Beauport, and thereby assumed the British deception on their flank was the main attack.

This is precisely the fear expressed by IPB skeptics. Skeptics believe that because IPB emphasizes identifying the most probable avenue of approach, a wily enemy who selects unlikely terrain could exploit a vulnerable area. The siege of Ouebec demonstrates that Montcalm correctly massed on the most likely avenue, but should have considered all four avenues and planned for defending them. The process assists in identifying all avenues of approach, and commanders must war game each one. This is the true value of IPB. Had Montcalm analyzed the two new avenues of approach using the IPB process as US Army doctrine suggests, he might have prepared contingencies, better defended the Anse au Foulon slopes and synchronized his counterattack. Montcalm reacted to the new development, but did not analyze the situation thoroughly enough. Today's commanders must realize the necessity to continuously review the situation and IPB analysis to update new developments. MR

NOTES

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C. P. Stacey, Quebec. 1759: The Siege and The Battle (New York: Saint Martin's Press, 1959), 191.
 Ibid., 102.

^{2.} Inol., 102.
3. US Department of the Army Field Manual (FM) 101-5-1, Operational Terms and Symbols (Washington, DC: US Government Printing Office (GPO), October 1985). Points or areas on the ground along a particular avenue of approach, through which enemy activity is expected to occur. Activity or lack of activity within a named area of interest will help to confirm or deny a particular enemy course of action.

^{4.} US Department of the Army FM 34-1, Intelligence and Electronic Warfare Operations (Washington, DC: GPO, 2 July 1987). A point or line, usually along a mobility corridor, where presence of an enemy or friendly unit cues the commander to make a decision. If a decision is not made by the commander before an enemy torce reaches or passes a decision point, a set of options that had existed may be negated.

had existed may be negated.

5. FM 101-5-1. Points or areas along a mobility corridor, the successful interdiction of which will cause the enemy to either abandon a particular course of action or require him to use specialized engineer support to continue.



Often the prowess and accomplishments of great leaders are not fully appreciated until long after they have passed from the scene. Such is the case with one of World War II's great commanders, General Joseph W. Stilwell. In this revealing sketch, the author not only chronicles Stilwell's role in the difficult task of operating in the China–Burma–India (CBI) Theater, but also credits him with making a lasting imprint on leadership in the US Army.

I tried to stand on my feet instead of my knees. I did not think the knee position was a suitable one for Americans. ¹ "Vinegar Joe" Stilwell

Someday when the war is only a filthy memory, the whole story of Stilwell in Asia will be told, the epic of an unpretentious man who went forth with sword in hand and slew the dragons of adversity in their dens. ²
CBI Roundup, (the official journal of the CBI)

THE STUDY of military history reveals a number of great commanders within our own experience who have demonstrated drive, skill and vision, and inspired our forces to achieve battlefield success. As the United States' greatest military endeavor, World War II offers particularly fertile ground for such a study. Preeminent examples include George C. Marshall, Dwight D. Eisenhower, Douglas MacArthur, Omar N. Bradley, George S. Patton Jr., J. Lawton Collins and Robert L. Eichelberger. Their achievements are frequently discussed in our doctrinal literature and studied in our professional military institutions. Yet, there is one commander who deserves more study than he

has received. A man of uncommon ability, he was one of the great leaders of World War II, but because he commanded in a theater of secondary importance, he has often been overlooked or forgotten. He is Joseph Warren Stilwell, better known as "Vinegar Joe," the commander of the China-Burma-India Theater (CBI) from February 1942 to October 1944. Few realize that at the beginning of the war, he was considered the Army's top corps commander and that he was Marshall's choice to command America's first offensive of the war—the landings in North Africa.' Stilwell was posted instead to the Far East to a position of immense responsibility. His mission, keeping the Chinese in the war against Japan, was one of "extraordinary complexity," which Secretary of War Henry L. Stimson considered "the most difficult task . . . assigned to any American in the entire war."4

The Stilwell example is especially important because he labored under conditions that have remarkable similarity to those that senior commanders of today are likely to face. He operated in a complicated joint and combined

environment, with limited resources and direction against a well-trained and disciplined foe. His successes were the result of his keen intellect and indomitable courage, two qualities that Carl von Clausewitz believed were essential to a great commander. Few have shown these qualities to the degree displayed by Stilwell in the CBI.

Foundations for Command

Upon graduation from West Point in 1904. Stilwell was commissioned in the infantry and sent to the Philippines. Of the next 37 years in the Army, he spent nearly one-third in the Far East, with most of that in China. During those years, he excelled as a commander, tactician and trainer. He also mastered several languages including Chinese. As an intelligence officer in World War I, Stilwell began his close association with Marshall, who would play a key role in his career. They renewed their association in China in the 1920s as officers in the 15th Infantry Regiment. Their admiration and respect for one another grew quickly. When Marshall became the assistant commandant of the Infantry School, Fort Benning, Georgia, in 1927, he was so impressed with Stilwell that he held open the position of head of the Tactical Section for a year until Stilwell returned from China.⁶ It was during this period that he gained the reputation as a natural leader of men and a practical tactician who demanded innovative ideas to the problems of attack and defense. Like Marshall, he recognized the changes in warfare brought about by mechanization. No longer could planners prepare detailed, time-consuming orders. He was determined to eradicate the formalistic approach that dominated the school. He preferred, instead, to teach tactics in the field where he stressed the virtues of simplicity, common sense and improvisation. He deliberately introduced disorder and confusion into the problems so that students would be forced to reach solutions with the urgency required in combat. His critiques were often harsh, and it is not surprising that he first acquired his nickname, "Vinegar Joe," from his students at Fort Benning.⁸ Yet, Matthew B. Ridgway echoed the sentiments of a generation of officers who later reached high command in

World War II when he likened these ordeals to "mental conditioning," which was more valuable than any number of memorized techniques." When Stilwell departed, Marshall described him as "a genius for instruction.... Foresighted, highly intelligent.... a leader.... one of the exceptionally brilliant and cultured men of the Army" and "qualified for any command in peace or war." "IO

In 1935, Stilwell returned for the fourth time to a China burdened by internal and external pressures, and there he assumed duties as the military attaché. He wrote brilliantly perceptive reports on Japanese goals in Asia, the facade of Chinese unity under Generalissimo Chiang Kaishek and the emergence of the Chinese Communists. When war broke out in China in 1937, Stilwell traveled throughout the war zone unlike most of the other attachés and gathered valuable intelligence on Japanese combat methods. It was during this period that the foundation was laid for his vision of China's role in World War II. He recognized that China's soldiers, so poorly served by Chiang's generals, could beat the Japanese if properly equipped, trained and led.

When Stilwell returned to America in 1939, he could claim to know China better than any other officer. As he sailed home to what he believed to be certain retirement, he learned that he had been promoted to brigadier general. One of Marshall's first acts as the new chief of staff was to recommend Stilwell's name for promotion. A month later, Europe was at war.

Selected for Command

In the rush to prepare for the approaching conflict, it appeared that Stilwell would finally lead American soldiers into battle. During those months, he emerged as one of the few field commanders who had mastered the ability to direct large formations with imagination and drive. He was rewarded first with a division and then a corps along with promotion to major general. When Marshall ordered a survey to be made of general officers, Stilwell's name appeared first on the list in order of merit. It, therefore, came as no surprise when Marshall selected Stilwell to lead the invasion of North Africa planned for late 1942. 12

The chain of events that instead lead Stilwell to command of CBI is equally illustrative of Stilwell's leadership qualities. The initial choice was Lieutenant General Hugh A. Drum, the Army's senior-ranking officer. However, when Drum learned of the vagueness of the mission and how few resources were to be committed, he felt that the job was not worthy of a man with his qualities and experience.¹³ The only logical choice remaining was Stilwell. When asked if he would go, Stilwell's characteristic reply was, "I'll go where I'm sent," even though he knew there was little likelihood he would receive American troops in the near future. 14 In today's Army where careers are often adroitly managed so they include the "right" assignments. Stilwell's selflessness provides a refreshing reminder of what service to the nation really means.

Stilwell's Mission

As Drum had feared. Stilwell's mission was indeed vague. American policy toward China was largely the creation of President Franklin D. Roosevelt, who fancied himself an expert on China because of his family's long history of economic involvement in Asia. His vision was of a postwar China that filled the vacuum left by a defeated Japan. His guidance to Stilwell was to assure Chiang of American assistance and "to treat China as a great power." 15 The strategy formulated by the American Chiefs of Staff was only slightly clearer. The prewar decision of "Germany first" reflected the widely held belief that the United States could not support offensives in Europe and the Pacific simultaneously. It was clearly unacceptable, however, to allow Iapan a free hand in Asia. Additionally, American observers reported that China was nearly exhausted after five years of war, and US planners feared that a Chinese collapse or separate peace would release Japanese forces to reinforce the Pacific. Conversely, a reinvigorated Chinese army could tie down Japanese formations in China. Furthermore, bases in China were believed essential to the final assault on Japan. ¹⁶ Therefore, Stilwell's mission was to "support China" and "to assist in improving the combat efficiency of the Chinese Army."17



Unfortunately, these plans did not coincide with those of Great Britain or China. Roosevelt's idea of China as one of the four postwar powers held no appeal for the British. They had no respect for the Chinese government or its military capabilities and had no wish to aid China. Their immediate concern was to defend Burma as the last obstacle to India.

As for the Chinese, they hated and distrusted the British under whose colonial policies they had been exploited for nearly a century. Furthermore the news of Pearl Harbor had been seen as a deliverance. There was no need to fight any longer; the Americans would defeat the Japanese. Although Chiang would gladly accept American Lend–Lease assistance, he had no intention of fighting the Japanese. His army would be saved for use against the Communists after the war. Only in this regard was Burma important since China's lifeline ran along the Burma Road from Rangoon to K'un–ming.

It was against this backdrop that Stilwell arrived in Chungking in March 1942. The situation in Burma was critical. The Japanese had already taken Rangoon and cut the Burma Road. In these desperate circumstances, Chiang placed Stilwell in "command" of the two Chinese armies sent into Burma to assist the British in stopping the Japanese advance. His actions during

this period reveal a man of singular determination, one able to analyze a situation in the confusion of combat and to carry through a course of action with moral and physical courage. 18 Stilwell seemed to be everywhere, encouraging and cajoling his troops into action. However, the units he had been given were in deplorable condition. Understrength, inadequately equipped and poorly led, they were in no shape to offer effective resistance. Furthermore, unknown to Stilwell, Chiang communicated secretly with his commanders, instructing them not to attack or become decisively engaged. Consequently, the Chinese generals offered trifling excuses for failing to carry out Stilwell's orders or simply ignored them. Only through personal example did he finally get Chinese units to conduct a vigorous assault. Midway through the campaign, he personally led a division counterattack that prevented the encirclement of his forces. Although later forced to withdraw. Stilwell had shown that the Japanese could be beaten. For this action, he received the Distinguished Service Cross, but in typical Stilwell fashion, he deemphasized his role in his official report, preferring to praise the Chinese. His concern for them was genuine, and he frequently took time out to visit the Chinese wounded. One of his surgeons wrote later that



Stilwell always seemed to have time for those trying to do a good job. 19

Stilwell fought beside the other great commander to emerge from the theater—General and later Field Marshal Sir William J. Slim. After the war, Slim recorded in his classic *Defeat into Victory*, his opinion of Stilwell's leadership during those difficult days.

"He was over sixty, but he was tough, mentally and physically . . . When he said he would do something he did it . . . He had courage to an extent few people have, and determination, which . . . had a dynamic force. He was undoubtedly the most colorful man in South East Asia—and I liked him." ²⁰

Unfortunately, Slim and Stilwell together could not stop the Japanese advance, and by the end of April, organized resistance had crumpled. Yet, with the end near and his staff begging him to evacuate, Stilwell refused to leave: "If I run out now that will be one more defeat, one more surrender. I could not command the Chinese again."21 There was an apparent method to his madness. In the middle of this catastrophe, there crystallized in his mind the vision that had taken form initially when he was an attaché. The loss of Burma meant that China was now completely isolated. He secured permission from Chiang for two divisions in Burma to withdraw to India rather than China. Reinforced with troops flown in from China, he would train and equip, under American direction, the nucleus of a new Chinese army. He intended to prove that the Chinese soldier, if properly led, could win. Burma remained the key, and with this new army, he intended to recapture it, rebuild new lines of communication in the air and along the Ledo Road and end China's isolation. Then, with revitalized divisions from China, he would drive the Japanese off the mainland of Asia. From this plan, he never wavered.²²

First, he had to withdraw safely out of Burma. As the British and Chinese armies retreated, Stilwell found himself isolated with his staff and a small force. To reach India and safety, they had to cross 150 miles of some of the most difficult terrain in the world. Stilwell led the way on foot,

driving them by the force of his own example. When they reached the last operational airfield, a plane met them with instructions to evacuate Stilwell. He refused the offer. While he was glad to save members of his staff, he intended to walk out with his troops even though the enemy was a mere 20 miles away. As their commander, this was his duty, one allowing no deviation. In late May, his group of 114 finally reached safety, the only party to do so without any loss of life. There is no question that they would have failed had it not been for Stilwell's leadership. For his efforts in Burma, Stilwell received a cable from Marshall commending him in the name of the president. He could not understand why he was being rewarded when all he felt was failure. When asked later for his comments on the conduct of the campaign, Stilwell rejected the British notion that it had been "a glorious retreat," and "a heroic, voluntary withdrawal." His sense of honor would not accept such an obvious distortion of the truth.

"In the first place, no military commander in history ever made a voluntary withdrawal. And there is no such thing as a glorious retreat.... We got run out of Burma, and it's humiliating as hell. I think we ought to find out what caused it, go back and retake Burma." That is exactly what Stilwell intended to do.

Preparations

For the next 18 months, Stilwell labored to retake Burma and end China's isolation. The obstacles, however, were not just the Japanese and the hardships of campaigning in Burma. Additional difficulties included logistics, British and Chinese intransigence and their denial of the necessity of the campaign, Roosevelt's failure to support Stilwell's proposals, efforts by other Americans in the theater who wished to see him fail and, finally, Stilwell's own personality that sometimes poisoned his relationships with those whose cooperation he needed. Marshall summarized Stilwell's position clearly when he said:

"He was out at the end of the thinnest supply line of all... He had a most difficult problem of great distances, almost impossible terrain, widespread disease and unfavorable climate; he faced an extremely complex political problem; his purely military problem of opposing large numbers of enemy with few resources was unmatched in any theater."²⁴

To this job of unmatched difficulty, Stilwell brought courage and skill, his knowledge of China and a hatred of inefficiency and corruption. A man of principle, Stilwell was determined to perform his mission as he saw it.²⁵

The outlines of the struggle that absorbed Stilwell's energies until early winter 1943 were established within weeks of his defeat in Burma. The struggle revolved around the proper Allied strategy for the theater. In attempting to translate that strategy into action, he became entangled in the twisted and often sinister politics of the Chinese and the British in India.

Stilwell's plans were linked directly to the problems of supply and the geography of the region. Burma was a great wedge between India and China. The air lines of communication (LOC) over the Himalayan "hump," established immediately after the Japanese victory, were a temporary expedient and could not possibly sustain major operations in China. The solution was clear. For China to fulfill its role in Allied strategy, the land and sea LOCs would have to be reopened and that meant retaking Burma. Stilwell's campaign plan envisioned a three-pronged drive:

- One by the British into southern Burma from India or the sea.
- Another into northwestern Burma from Assam by his American-trained Chinese divisions.
- Finally, a third from Yunnan, China, into eastern Burma by Chinese divisions also trained by Americans and supplied over the hump.

While the British and the Chinese agreed in principle to the necessity and urgency of the campaign, neither was willing to commit the forces. Over the next year and a half, Stilwell devoted his efforts to the twin battles of preparing his Chinese forces and making his allies fulfill their promises.²⁶

The airlift to India, the Ledo Road and the offensive into Burma all depended on the British



(Above) A truck loaded with Chinese troops passes along a segment of the Burma–Ledo Road bored through a mountainside. (Right) A portion of the road in China.

in India. Yet, the defeat in Burma, nationalistic turmoil in India and priorities in other theaters resulted in British reluctance to plan for operations into Burma or provide assistance to the Chinese. This attitude started with Winston Churchill and naturally filtered down to his commanders. He believed the Burmese jungle to be the worst place to fight and visualized a slow and costly land campaign in which the advantages of Allied sea and air power could not be productively employed. He was quite willing to fight, however, in Malaya and the Dutch East Indies in order to recapture Singapore. Additionally, Churchill rejected Roosevelt's vision of China's postwar role and the notion that sending supplies would improve the effectiveness of Chinese armies or their willingness to fight. Furthermore, there was more than a grain of truth to the accusation that the British were not entirely disappointed in their failure to defend Burma since victory would have required an acknowledgment of Chinese assistance, something their colonial attitudes would not accept. As a result, Americans in India were convinced the British were not interested in fighting the Japanese. 21

The most vocal critic of the British was Stilwell himself. He openly accused them of having a defeatist attitude and of conducting the first Burma Campaign incompetently. His comments were often insensitive and certainly did not apply to commanders such as Slim. Such



careless remarks made his task of coordinating a combined campaign more difficult. This unfortunate aspect of his character detracted from his admirable leadership qualities and led to more serious difficulties in China.

Stilwell's logistic difficulties were due mainly to the low priority assigned to the CBI, but this did not change his belief in China's indispensability, and he continued to press his case in Washington at every opportunity. Yet, he refused to succumb to the urgings of his staff to lobby for his needs like other theater commanders. His reasoning is a valuable lesson for today's senior leaders who sometimes suffer from "localitis":

"I will not bring any pressure on George Marshall. He's running a war all over the world. It's up to him to determine who should get what." ²⁸

Stilwell's greatest difficulty remained China. The defeat in Burma convinced him of the need to reform and reorganize the Chinese army. He planned to consolidate China's 300-plus divisions into about 100 divisions, trained and equipped under American direction. He would start with the Chinese army in India (X Force) and a 30-division force in Yunnan (Y Force). However, Chiang was not interested in reform. He feared such a force might pose a threat in the hands of an ambitious rival. Removing incompetent commanders would also eliminate many loyal to him. In short, to reform the army along the lines suggested by Stilwell would have weak-

ened Chiang's power and required reforming the entire sociopolitical system. ²⁹

In any case, Chiang was not interested in fighting the Japanese. His promises to fight were merely devices to obtain badly needed supplies to strengthen his power and to fight the Communists in the inevitable civil war to come. Stilwell's function, in Chiang's eyes, was to facilitate his requests for military and economic aid. As supervisor of Lend-Lease aid to China and a man of principle, Stilwell did not see himself as Chiang's agent soliciting for his desires and needs. He was as an American representative trying to help China resist and defeat the Japanese. Recognizing this, Chiang often threatened to stop fighting. He also made several attempts to have Stilwell removed. Again, Stilwell's own careless outbursts concerning Chiang undermined his position. He often referred to the Generalissimo as the "Peanut" or a "tribal chieftain," and this attitude filtered down to his staff. Such insults quickly found their way to Chiang. and even Marshall was aware of them. This unfortunate side of Stilwell has been lamented by several critics, who suggest that someone with more tact could have produced harmony in Chungking. This is undoubtedly true; however. not enough of these accounts of Stilwell's caustic manner consider the conditions under which he labored. The world he operated in was filled with deceit and distortion, and it was his mission to endure these difficulties while he tried to fulfill his mission. As one observer commented, had Saint Francis of Assisi been given the same task, he would have been known as Vinegar Frank. 30 While a different commander might have maintained better relations with Chiang, that was not the object of supporting China.³¹

Unsuccessful in gaining Stilwell's removal, Chiang eventually found an ally in General Claire L. Chennault, commander of the famous Flying Tigers. He convinced the Generalissimo that his air forces, if reinforced and supplied, could defeat the Japanese in China without the need for a costly land campaign. This appealed to Chiang since it ensured that his carefully husbanded supplies would not be used. It

also committed American air power to the support of his regime without the need to reform the army or risk it in combat. This idea also appealed to Roosevelt because it was what Chiang wanted and because it offered the chance for a cheap quick success against the Japanese at a time when the United States was straining to support other theaters. At the president's order, Chennault's air campaign was given priority over the objections of Stilwell and nearly all of his close military advisers. Supplies reaching India could not support the Ledo Road and the rehabilitation of the Chinese army simultaneously with Chennault's bombing campaign. Consequently, Stilwell's projects were significantly cut back.³² Ironically, Stilwell, and not Chennault, offered the best hope to save Chiang. Stilwell's only desire in the face of the Generalissimo's constant delaying efforts was to build, for him, the thing that he needed most—an army that could beat the Japanese. Had he allowed that, Chiang might have faced the Communists from a stronger position after the war. Stilwell asked nothing in return; he had no postwar ambition except to retire to his home in California.

Inadequate presidential support represented by the preceding example demonstrates yet another obstacle to Stilwell's efforts to support China. As Stimson stated after the war, "More than any other American theater commander in the war, Stilwell required the constant and vigorous political support of his own government, and less than any other commander did he get it." Instead, Roosevelt sent a stream of special emissaries to determine the proper course of America's China policy; most of them knew little of China or the difficulties that Stilwell faced. The freedom of action that the president gave to his other commanders and which they learned to expect was never accorded to Stilwell. The freedom of action that the president gave to his other commanders and which they learned to expect was never accorded to Stilwell.

Retaking North Burma

By the middle of 1943, it was clear that China had not fulfilled the role American planners had envisioned at the beginning of the war. The twin drives across the Pacific increasingly diminished the importance of China, and it appeared that

Japan could be defeated without operations on the Chinese mainland. Yet, China did offer an attractive base for bombing Japan with the new B-29 bomber. However, as Stilwell predicted, Chennault's air offensive had not significantly hurt the Japanese in China even though it had monopolized the supplies coming into China over the hump. A bombing campaign that could hurt Japan would require many more times the tonnage than was currently coming from India by air. The solution pointed to an offensive into Burma, as Stilwell had maintained all along. That decision was formalized at the Cairo Conference in late 1943 with Chiang and Stilwell both in attendance. However, demands elsewhere dictated that it would be a limited campaign to take north Burma. Then the Ledo Road could be completed and a more southerly air LOC established. It appeared that Stilwell's vision might be realized after all.

Despite agreement in principle, the British and Chiang continued to guarrel over the details of the campaign and the conditions of participation. Disgusted and with only a general Allied plan, Stilwell left for the Ledo front in December to join the Chinese divisions that had already begun their drive into north Burma. He remained there until July 1944. For his personal participation in the campaign, he has been severely criticized for abandoning his headquarters to fight as a "three-star battalion commander." But Stilwell was a commander who had run out of options, as well as patience. It had been impossible to convince Chiang or the British of the need for the campaign or that the Chinese could defeat the Japanese; Stilwell would have to demonstrate both. It was more important to deploy the Chinese in combat, be with them as their commander and prod them to victory than to argue their value in endless conferences. Success might spur his allies into action where all else had failed. 36

Stilwell's plan called for X Force to seize the all—weather airstrip at Myitkyina before the monsoon season. The success of the strategy to support China depended on opening a land route and expanding the air route to China.

From Myitkvina, the Ledo Road could link up with the existing track of the Burma Road; the airfield would allow pilots to fly a safer and shorter route to China. Supporting Stilwell would be Major General Orde C. Wingate's Chindits, whose mission was to cut lapanese LOCs into Stilwell's area of operations. The only American component of the Chindits, the 5307th Composite Unit (Provisional) better known as Merrill's Marauders (code–named GALAHAD) worked directly for Stilwell. While Wingate's forces conducted deep penetration operations, the 5307th would execute a series of turning movements into the Japanese rear while the Chinese applied frontal pressure. Meanwhile, British forces under Slim would also support Stilwell's advance with an offensive into central and southern Burma.

The complicated issue of command reveals both the strengths and weaknesses of Stilwell's leadership. In the complicated command structure of the theater, Stilwell wore no fewer than five hats. As the commander of Chinese forces. he was subordinate to the British commander of all ground forces in the theater who, in turn, was technically a subordinate of Stilwell in his capacity as deputy commander of the newly created Southeast Asian Command, with Admiral Lord Louis Mountbatten as the supreme Allied commander. Stilwell refused to come under the ground commander's control, believing that he was too cautious. He did agree, however, to serve under Slim, whom he knew to be a fighter, but who was junior in rank as well as position. ³⁷ Predictably, Stilwell's attitude nearly upset the alliance on the eve of the campaign. It also illustrates how Stilwell was often "his own worst enemy," who poisoned relations with the British and the Chinese by openly expressing contempt for their "do nothing" attitudes. Yet, he never had any trouble with those who had a sincere desire to fight the Japanese. As Marshall wrote in a letter to Mountbatten:

"You will find . . . that he wants merely to get things done without delays . . . He will provide tremendous energy, courage and unlimited ingenuity and imagination to any aggressive proposals and operations. His mind is far more alert than almost any of our generals and his training and understanding are on an unusually high level. Impatience with conservatism and slow motion is his weakness—but a damned good one in this emergency."³⁸

The Chinese troops that began the north Burma Campaign had been assembled in Ramgarh. India, after the first Burma Campaign. There, at Stilwell's insistence, they were paid, fed, clothed, housed and treated medically, most for the first time since their impressment into the army. Then they were extensively trained with American weapons and in American tactics under the direction of a corps of hard-working instructors and interpreters. "And in return," one Chinese was heard to say in astonishment, "All the Americans want us to do is fight!"39 And fight they did in some of the worst terrain in the world and against a first-class enemy, the 18th Division, veterans of the Singapore and Burma campaigns. Japanese radio broadcasts described the fighting as the fiercest in Asia. That the Chinese did advance was due almost entirely to the unrelieved pressure of Stilwell's physical presence. Knowing the Chinese proclivity for caution, reinforced by Chiang's covert admonitions to his

commanders to avoid decisive combat, Stilwell established his headquarters at the front. There he set a brutal routine for himself, hiking for miles to Chinese command posts where he alternately bullied, flattered, shamed, threatened and rewarded them to keep up the advance. Frequently, he would just stand around refusing to Le until the order to attack was given. He even exposed himself to enemy fire in order to get them moving. In the field, he lived simply, eating the same tood as his soldiers and frequently sharing his cigarettes with soldiers who had none. He also insisted on the immediate evacuation of the wounded and construction of airstrips, from which to fly them to hospitals in the rear where he visited them weekly. This care and concern gave the Chinese soldier a new-found pride and confidence that Stilwell knew he could count on in battle. 10

While the difficulty of instilling an aggressive spirit in Chinese commanders persisted, Stilwell's forces slowly but surely advanced toward Myitkyina. His tactics were borrowed from the Japanese. While the Chinese advanced frontally, the Marauders enveloped the Japanese positions and established blocks in the rear. Although Stilwell was unable to destroy the 18th



Division, he forced the Japanese to withdraw. Realizing, however, that his advance would not reach Myitkyina before the monsoons began, Stilwell conceived a bold plan to strike deep into the Japanese rear to seize the airstrip. After three weeks and an exhausting march, the composite force of Marauders, Kachin natives and Chinese emerged from the jungle and took the airfield from the surprised handful of Japanese defenders on 17 May 1944. Stilwell was exultant for he had succeeded in doing what many had said could not be done. Churchill wired Mountbatten demanding to know how "the Americans by a brilliant feat of arms have landed us in Myitkyina."

Then, unfortunately, things began to go wrong. Due to the inevitable friction in war, the town was not taken before the Japanese had succeeded in reinforcing it and a prolonged siege followed. In bitter disappointment, Stilwell leveled accusations against the British, an act he later regretted. Finally, Myitkyina capitulated on 3 August, but the cost was high. The one American gro hat unit in the theater, GALA-HAD, was ruined as were the Chindits. Since then, Stilwell's reputation has suffered at the hands of historians and participants in the campaign. They accuse him of exploiting GALA-HAD and the Chindits and criticize his failure to properly recognize their achievements and sacrifices. The image that survives is of a cold, insensitive leader who was concerned only with his reputation and that of his Chinese divisions.

While there is no doubt that these other units were treated unfairly, no one knew that better than Stilwell. Extracts from his diary reveal the anguish he felt for these men and their leaders. Yet in fairness, he resisted extending rewards or special treatment to those units when he could not offer the same to Chinese troops who fought under equally difficult conditions. More important, however, is that Stilwell understood the responsibility that the commander has, as in a contract, to ensure that his men are not needlessly expended. Persevering in the face of the misery and death that existed until Myitkyina fell reveals the depth of his moral courage and his un-

derstanding of the importance of that contract. If Stilwell had halted his offensive without securing his objective, it would have been another year before he could have started again, if ever. Then the lives of British, American and Chinese soldiers alike would have been lost for no purpose.

However, Myitkyina was taken, and despite the disappointment, it was a triumphant vindication for the man who maintained all along that it could be done. He had reopened the land route to China, and he proved the truth of his assertion that the Chinese could fight. As Slim later wrote, "When all is said and done, the success of the northern offensive was in the main due to the Ledo Chinese divisions—and that was Stilwell." Stilwell had indeed implemented his vision.

Relief and Reflections

Another major cause of Stilwell's difficulties in the drive to Myitkyina had been the failure of Chiang to allow the Y Force to participate in the campaign as he had promised earlier. Chiang's failure to help in his own salvation finally swung Roosevelt behind Stilwell. The president's series of communiques to Chiang, first imploring and then demanding that he initiate the drive into Burma, unfortunately came too late. Chiang believed incorrectly that Stilwell was behind Roosevelt's new attitude. He threatened to cease resistance on the Burma front, a move that Roosevelt countered with the demand that Chiang place Stilwell in charge of the Chinese armies or risk losing Lend-Lease support. An impasse was reached that could only be solved by Stilwell's recall. When he left in October, it was a kind of closing, the signal that a great endeavor was now over. Yet, thanks to Stilwell, his successors would have resources far beyond any that they ever had, and with these means, they were able to carry on the work that he had almost "single-handedly begun" in 1942 in compliance with his order to support China. 44

Stilwell's reputation has suffered since the posthumous publication in 1948 of *The Stilwell Papers*, a collection of his journal entries and let-

ters. Intended as partial explanation of events, it instead portraved Stilwell as blunt, outspoken. insensitive and possessed by various hatreds. Yet, it must be remembered that these writings, from which authors have borrowed so heavily, were not intended for publication and were not a polished postwar memoir. They were his release from the daily frustrations of command in a theater marked by ignorance, duplicity and folly. A true picture of Stilwell cannot ignore that his stubbornness and impatience resulted in poor decisions and arguments with those whose support he often needed. And that perhaps is a large part of the value of studying Stilwell's leadership in what was surely the least known of the combined theaters of World War II. With all things considered, he was above all a leader with tremendous abilities who was admired and respected by his men. He successfully accomplished his mission of supporting China with unique determination under uncommonly difficult conditions. 45 His own words on command,

however, provide a more fitting conclusion to this examination of his leadership in the CBI:

"The average general envies the buck private; when things go wrong, the private can blame the general, but the general can blame only himself. The private carries the woes of one man; the general carries the woes of all. He is conscious always of the responsibility on his shoulders, of the relatives of the men entrusted to him and their feelings. He must act so that he can face those fathers and mothers without shame or remorse. How can he do this? By constant care, by meticulous thought and preparation, by worry, by insistence on high standards in everything, by reward and punishment, by impartiality, by an example of calm and confidence. It all adds up to character . . . [and] If a man can say he did not let his country down, and if he can live with himself, there is nothing more he can reasonably ask for."46

A simple but eloquent expression of the ideals of "duty, honor, country." MR

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WWII Almanac

Spring Disaster: The Red Army's Kharkov Offensive

Colonel Richard N. Armstrong, US Army

Spring came late in 1942. The German High Command knew a Red Army offensive was imminent. After fierce attacks and counterattacks in the long, grueling winter months of January and February, a new front line formed with a Soviet salient across the Northern Donets River south of Kharkov, threatening German supply operations in southern Russia and the annihilation of the First Panzer Army.

The Red Army wanted to follow its successful winter operations by maintaining the strategic initiative with a spring offensive. Believing the Germans were focused on attacking Moscow, Joseph Stalin and the Red Army General Staff concentrated Soviet strategic reserves in the Orel–Kursk regions to protect the southern approach to the capital. The Red Army High Command calculated an offensive around Kharkov could be conducted without encountering significant German army reserves.

German army planners, on the other hand, believed it necessary to restore the situation south of Kharkov before attempting a major offensive operation: a strategic drive across southern Russia into the economically rich Caucasus. Army Group South decided on a limited double envelopment, encircling the Soviet forces west of the Northern Donets River with General Ewald von Kleist's Army Group and Sixth Army. The starting date for the operation was to be the middle of May since, before then, a majority of the participating German army troops would not have had sufficient time to reorganize and resupply.

On 12 May 1942, anticipating the German offensive by five days, Marshal S. K. Timoshenko, commander of the South–West *Front*, launched a powerful "decisive offensive," as he called it in his order of the day. The South–West *Front*'s operation sought to envelop German forces in the Kharkov area from north to south, carrying the offensive farther to the west and the Dnieper River. The Northern Shock Group, consisting of the 28th, 38th and part of the 21st armies, attacked the German defense near Volchansk, and the Southern Shock Group of the 6th Army and also General L. V. Bobkin's Group broke through the German defenses west of Izyum. The 9th

and 57th armies of the South *Front* advanced, protecting the southern flank of the offensive.

Despite the great number of units drawn together in the South–West *Front*'s offensive, the numerical superiority of Soviet troops over the German forces was very slight at 2.1–to–1. Red Army rifle divisions were no more than 8,000 to 9,000 men while German infantry divisions were at nearly 90–percent strength with 14,000 to 15,000 men. The South–West *Front* had an advantage of 1.5–to–1 in artillery and mortars and possessed a slim advantage in tanks at 2.5–to–1.

However, the scale and intensity of the Soviet offensive surprised the Germans who detected a powerful combination of air, artillery, infantry and tanks. Adopting lessons from the first half year of war, the Red Army was in transition. The size and organization of basic fighting units were balanced with the limits of industrial production and commanders' abilities to control large units. The Red Army Supreme High Command, the *Stavka*, directed the South–West *Front* to create three new tank corps from tank brigades already assigned to the *front*. German intelligence, believing Soviet tank brigades formed the biggest armored formation, never realized the South–West *Front* had created new tank corps and deployed two of these in the salient.

In the first 72 hours, Soviet units advanced 25 kilometers in the north at Volchansk and 50 kilometers south of Kharkov. With his successful offensive thrust from the salient, Timoshenko could have committed his tank corps into the 6th Army breach to lead the encirclement of the enemy group. Although the Germans had gained air superiority on 14 May, Timoshenko waited and held his armored punch for a more suitable moment.

Meanwhile, the Germans completed preparations for their offensive with General Friedrich Paulus Sixth Army poised to strike north of the salient. Army Group Kleist would strike against the 57th and 9th armies of the South *Front*, which were protecting Timoshenko's penetration. The two rifle armies held a 180-kilometer sector, their defense based on a system of strongpoints 3 to 4 kilometers in depth with no reinforcements at the front.

On 17 May, Army Group Kleist, including one panzergrenadier, two panzer and eight infantry-divisions, crashed into the 9th Army sector, advancing 20 kilometers in the early part of the day. German numerical superiority in the 9th Army sector was in number of infantry battalions at almost 1.5–to–1, artillery at 2–to–1 and tanks at 6.5–to–1. Soviet troop defenses were shallow and easily penetrated. Supported by large air forces, five German infantry divisions pressed against the 57th Army, imperiling the rear of the 57th Army and the entire South–West Front assault at the base of the salient.

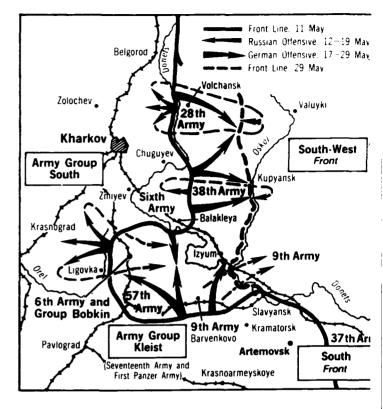
With faulty intelligence on the size and location of the German buildup on his flanks, Timoshenko, on the morning of 17 May, decided to commit the 21st Tank Corps to the drive on Kharkov. His initial reaction to the southern assault was to dispatch the 5th Cavalry Corps, a rifle division and a tank brigade from his reserve to strengthen the hard–pressed 9th Army. The 2d Cavalry Corps was also given to the South *Front* commander, who was ordered to counterattack. But, in a rapidly deteriorating situation, the South *Front* lost contact with the 9th Army and the cavalry corps.

In the meantime, Soviet forces north of Kharkov, faltering in their assault, took up defensive positions. Timoshenko requested more forces to hold the bulge. Since the strategic reserves protected Moscow, the Red Army possessed no immediate reserves to throw into the situation. The *Stavka* ordered Timoshenko to continue his drive on Kharkov. Stalin himself talked with Timoshenko that night, assuring the field commander that the southern defense would hold.

By the next morning, the South *Front*'s inability to hold the German onslaught became evident to the Soviet field commanders. On the very first day of their offensive, the German forces succeeded in breaking through the 9th Army's shallow defenses. The chief of the Red Army General Staff approached Stalin to halt the offensive, but Stalin refused.

By the evening of 18 May, the German units, advancing to the north 4C to 50 kilometers, reached the Northern Donets in the vicinity of Makhachkala (Petrovsk). German air strikes destroyed the 9th Army headquarters. Without their higher control element, 9th Army troops were forced to withdraw to the north, northwest and behind the Northern Donets. The advance of Army Group Kleist along the west bank of the Northern Donets created an immediate threat of envelopment for the entire Soviet force operating in the Barvenkovo salient. Decisive action was required to fend off the German counterattack and stabilize the situation.

In view of the circumstances, the South-West



Front offensive should have been halted; its forces shifted to assist the South Front in closing the breach. There is controversy within Soviet military literature over who failed to call off the offensive at this point. In a telephone call from Nikita Khrushchev (Timoshenko's commissar and the future leader of the Soviet Union) to the Chief of General Staff A. M. Vasilevskiy, the political officer asked for a cessation in the offensive. Stalin, ignoring the advice of his political watchdog, continued to refuse to halt the drive on Kharkov.

Not until the evening of 19 May, when the 6th and 57th armies and also Group Bobkin were in certain danger of being surrounded, did Timoshenko order the 6th Army to halt its advance and join the 9th and 57th armies in a concentrated effort to eliminate the German breach. Stalin agreed with the order.

On 21 May, the situation took a decisive turn for the German army. Army Group Kleist's spearhead, the III Panzer Corps, struck due north with one panzergrenadier and two panzer divisions at Balakleva, west of Izyum, while its infantry divisions faced west against the retreating South–West Front. At the same time, Paulus ordered his Sixth Army to attack south across the Northern Donets with one infantry and two panzer divisions. Both sides of the pincer met during the afternoon of the following day

southwest of Balakleya. Both forces turned their fronts to the west, their backs against the Northern Donets, waiting for Timoshenko's breakout attempt.

Withdrawal routes across the Northern Donets were cut off for Soviet troops remaining in the salient. Reversing its direction, the South–West *Front* attempted to break out of the encirclement against superior German forces that completely controlled the air. Soviet troops were short of ammunition, fuel and food. The pressing advance of the Army Group Kleist's panzer and *panzergrenadier* units prevented an orderly concentration of 6th Army forces against the breakthrough. In fights of appalling slaughter, groups of Russian infantry and tanks charged desperately against the closed German ring.

Isolated groups of Red Army troops succeeded in slipping out of the encirclement and crossing to the eastern bank of the Northern Donets. In a battle of annihilation, the Germans claimed destruction of 15 infantry divisions, seven cavalry divisions, 10 tank brigades and the capture of 200,000 troops. Red Army casualties were heavy in senior leadership ranks, including General F. Ya Kostenko, deputy commander of the *front*, General K. P. Podlas, commander of 57th Army, General A. M. Gorodnyansky, commander of 6th Army, and Bobkin. Gorodnyansky, a brave and courageous commander in the previous summer's battles, shot himself.

The spring disaster at Kharkov tilted the scales of the southern wing of the Soviet-German front in favor of the Germans. The Red Army with its fledgling tank corps was still no match for the more experienced armored formations of the German army. Timoshenko, relieved of his command, spent the remainder of the war in the backwaters of responsibility.

By eliminating the Red Army salient and inflicting a severe attrition of forces, Germany improved its starting position for a new, major offensive that would lead it into the Caucasus and Stalingrad. Kleist continued fighting on the Eastern Front until Hitler relieved him along with Field Marshal Erich von Manstein in March 1944. Paulus surrendered himself and his army at Stalingrad in February 1943.

Kharkov was a small battle in the context of the war on the Eastern Front, but it decided the strategic initiative in the summer of 1942. The Red Army defeat opened the way for the German army to invade the southern Soviet Union and Stalingrad. **MR**

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May 1942 Major George J. Mordica II, US Army, Combat Studies Institute. USACGSC

Friday 1—British forces are outflanked in Mandalay, Burma. Mandalay falls to the Japanese.

Monday 4—The Allied and Japanese Battle of the Coral Sea begins in the Pacific.

Tuesday 5—Japanese forces begin landing on Corregidor just prior to midnight.

Wednesday 6—Lieutenant General Jonathan M. Wainwright unconditionally surrenders all US forces in the Philippines to the Japanese.

Thursday 7—From Manila, Wainwright, now a prisoner, broadcasts the terms of the surrender to forces still holding out in the Philippines.

Friday 8—Wainwright dispatches messages to key officers in the Philippines, urging them to surrender their forces.

The main action of the Battle of the Coral Sea occurs with naval forces of both the Allies and Japan

attacking each other with carrier aircraft.

Tuesday 12—German U-boat sinks US cargo ship off New Orleans, Louisiana.

Soviet Red Army units begin an assault against German forces at Kharkov.

Thursday 14—US Congress enacts legislation establishing the Women's Army Auxiliary Corps (WAAC).

US code-breakers identify coming Japanese attack on Midway islands in the Pacific.

Friday 15—Japanese forces complete the conquest of Burma.

Wednesday 20—In the United States, gas rationing begins in 17 states.

Thursday 21—German Chancellor Adolf Hitler cancels Malta invasion until Egypt is taken.

Tuesday 26—Field Marshal Erwin Rommel begins a new offensive in North Africa.

Thursday 28—German forces are victorious over Russian forces at the Battle of Kharkov.

Friday 29—Reinhard Heydrich, SS commander for Czechoslovakia, is mortally wounded in a partisan assassination.

Saturday 30—The Royal Air Force opens the air offensive against Germany on an unprecedented scale by bombing Cologne for two consecutive nights. More than 1,000 planes participate and more than 2,000 tons of bombs are dropped. The British lose 39 bombers, mostly to night-fighters.

Insights

Force Protection: The Stepchild of Military Operations Lieutenant Colonel Donald B. Vought, US Army, Retired

Force protection, like most terms coined to identify something more complex than a single act, has been the subject of contemporary "Humpty-Dumptism," that is, the term has meant what the speaker wants it to mean, nothing more and nothing less. In its broadest sense, force protection might be considered as encompassing everything from dental care to sophisticated air defense measures. Both, in fact, preserve the force's operational capacity and, at the risk of sounding absurd, without a force willing and able to function, the probabilities of mission accomplishment diminish rapidly. A commander's responsibilities for protecting his own force are, therefore, as ur quivocal as his responsibilities to train and em; y it. As such, force protection is a consideration that must be ever present in the minds of leaders at all levels.

My intent in this essay is not to address the wider implications of force protection, many of which would be subsumed under sustainment, but to focus on the narrower activity defined as "active and passive measures designed to deter and defeat threats directed toward military service members, their family members, DOD [Department of Defense] civilians and the facilities and equipment which support them in the execution of operations." While the need for force protection is patently obvious, there are strong cultural inhibitions and institutional biases that militate against the routine inclusion of force protection in plans, education and training. Paradoxically, great interest is displayed when deploying to areas of elevated risk, at which time our crisis action behaviors frantically try to compensate for failure to routinely develop crisis-avoidance skills.

The views expressed in this article are those of the author and do not purport to reflect the position of the Department of the Army, the Department of Defense or any other government office or agency.—Editor

The first hurdle, and perhaps the most serious, is that force protection measures are simple and low cost. We (Americans) have become addicted to technology and the higher the technology, the better. Security technology, in general, is "low tech," and its procedures are not very challenging; thus, there is little basis for building a constituency—unlike armored vehicles, airplanes and communications equipment. Another factor is that success is hard to judge. If force protection efforts succeed, nothing happens. There are no hair—raising incidents, and we are deprived of that glow of victory over this or that well—defined enemy.

Nature of the Enemy. The nature of the threat contributes to our problems because of its ability to change—from no threat to a critical—level threat and back to no threat—in a matter of hours. This is because the threat may be based on the presence of a few unidentified people in geographical proximity to our force. In traditional combat, an enemy unit is clearly hostile. The extent to which the enemy threatens us or our mission is a product of many variables, but the threat is always present.

The enemy against which we defend through force protection is situational. For instance, a small, ill—equipped criminal or terrorist group poses little or no threat to a battalion, per se, but it can constitute a serious threat to the members of the battalion as individuals. Further, the potential enemy may or may not choose to attack, and if he does not, he is identified as neither threat nor enemy.

To demonstrate security concerns against such a sometime foe runs contrary to the natural (culturally derived) tendency toward bravado common to members of our Armed Forces. To show fear or even caution is confused with cowardice and can lead to embarrassment and shame. In part, the cavalier treatment of personal protection stems from tailure to understand that in the case of a terrorist attack,

the victim, by his victimization, becomes a testimony to the terrorist's skill or, even worse, a weapon in the terrorist's arsenal—a hostage.

Another American cultural trait working against a successful force protection program is our positive thinking (care is taken to avoid negative expressions in official writing). One can literally observe "positivism" in action as decisions are reached. After a course of action is favored, any inputs that do not support it are ignored, rejected or modified to conform to the preconception. Perhaps more dangerous in the long term than selecting that which conforms to our preconception is the tendency to resent those who voiced the offending information. In time, a leader can easily end up consulting with a chorus of Pollyannas, which equates to working alone. In such an environment, force protection, which we have already identified as being mundane and, frankly, dull, can easily be left out of the planning process—not because security might not be a problem but because it should not be a problem. Parenthetically, we might add that Napoleon should have won at Waterloo; Joseph Stalin should have sued for peace as the German army approached Moscow; and the Titanic should have sailed all the way to New York. At this point, positive thinking becomes wishful thinking, and risk imperceptibly metamorphoses into gamble.

What is the threat to US Armed Forces from groups engaging in terrorist acts at the turn of the 21st century? Avoidance of the term "terrorism" is The often-demonstrated obsession intentional. with definitions not only distracts from the issue of protection but also can serve to anesthetize systemic consideration. If there is no threat from those who pursue political goals (generally expressed in heroic, ideological or religious terms), then to many, there is no threat. This view prevails in an organizational context despite the fact that I have yet to find any American who expresses a preference for being injured or killed by someone with a particular motivation. Thus, for force protection purposes, the definition of threat must be widened to encompass common criminals and the psychologically disturbed, as well as saboteurs and groups employing violence for political (to include ideological and religious) purposes.

The 1990s and, in all probability, the first decade of the 21st century will be characterized by a high incidence of individual and intergroup violence. This trend is evident in 1992, and the reasons for a gloomy prognosis are already discernible to those who wish to see. The breakdown of social control mechanisms in those states moving from totalitarian or authoritarian systems to whatever political forms

they eventually develop has unleashed ethnic and religious intercommunal violence, as well as a phenomenal increase in criminal activity in Eastern Europe, parts of Africa and parts of Latin America. Economic dislocation resulting from the creation of artificial states, unrealistic development philosophies over the last 40 years and the inexorable pressure of population growth have fostered violence ranging from piracy to employment riots to increased crime in Latin America, Africa and South Asia. Economic migration leading to a resurgence of ultranationalism and xenophobia has increased intercommunal violence in Western Europe, the Middle East, West Africa and East Asia.

American propaganda notwithstanding, the practice of democracy does not, ipso facto, reduce violence. Recent examples include the Georgian Republic, Philippines, Algeria, Haiti, El Salvador, Egypt and Turkey, to mention only a few. Our own homicide figures, some 20,000 annually, belie the myth that violence is only the reaction to oppression. Consider what is happening to the thousands of recently unemployed political police, intelligence agents and "enforcers" from defunct regimes. It is highly unlikely that many will turn to landscaping or child care. On the other hand, crime, to include drug trafficking and political skulduggery, will allow for a smooth career transition. Some are already showing up in just such second careers. Overlay this mosaic of violence—mostly not by the military or the state—with the existence of unknown millions of weapons and the nearly certain continuance of drug-related crime, and one would have to be the quintessential optimist to accept "no threat" as other than a temporary situation. As quoted by an anonymous 6th century author, "A general should never have to say 'I did not think of that.' '

Arguments for greater concern with force protection are familiar but compelling. First, and perhaps least pressing in the long run, is our doctrine for combat. Increased fluidity blurs the distinction between "front" and "rear" areas, resulting in security requirements against other than tank regiments or air strikes becoming everyone's concern. Second is the fact of worldwide exposure. Large concentrations of US Armed Forces (Europe and Korea) are being reduced, but the dispersion continues. As states form and disappear under the influence of national restlessness and perceived economic need, the Army's passive role of deterrence will become more active in an era where use of military resources in operations short of war will be the norm. Concomitantly, military personnel will be increasingly exposed to the domestic environments of areas experiencing violence. (In 1991 alone, service members were killed by terrorists

in Turkey, Greece and El Salvador.) Further, they will not be exposed in division—size increments but in less defensible driblets of individuals, teams and small units.

The third factor is the continuing appeal of Americans as targets for violent acts. For the common criminal, we are visible, accessible and often relatively affluent. While we are not all rich, the perception is to the contrary, and like all people, criminals act on their perceptions.

To the religious extremist of whatever persuasion, we represent a mundane, even vulgar, culture that has repeatedly, albeit unwittingly, shown itself to be corrosive of the extremist's religious dogma. There is little that will motivate the zealot as much as the prospect of eliminating a successful secularist or heretic, an act that can only result in merit for the zealot who is executing what is perceived as Divine will.

Political activists who are prepared to maim and kill for their cause (ideological, ethnic or economic) all too often see Americans as associated with the "other side" or, at least, symbolic of an alien philosophy. Even more common are groups that are prepared to express dissatisfaction with one or another US policy by attacking a locally available military target as a proxy for the government. Over the last two decades, we have experienced such symbolic acts both domestically (such as Reserve Officers' Training Corps offices and recruiting stations) and in overseas locations (such as various headquarters, United States Information Service libraries, cultural centers and others).

Exacerbating the problem of being an all-purpose target is our demonstrated extraordinary concern for individuals. The plight of a mere handful of hostages plagued our government and influenced US foreign policy for years in the 1980s (recall that the same thing occurred in the early 1800s in the same part of the world during our now famous tiff with the Barbary pirates). This concern, coupled with the fact that America is the target of everyone's worldwide public relations efforts, virtually assures that we will continue to be considered foils for the activists of myriad causes.

Defining Force Protection. To clarify force protection, consider it to have three constituent parts: operations security (OPSEC), physical security and personal protection (individual awareness of threat and protective measures). The latter is essentially a matter of leadership, education and training. OPSEC and physical security, on the other hand, entail planning and resource allocation based on a simple thought process that is fundamental to the profession of arms—determine the threat; identify your own vulnerabilities; act to reduce the vulnerabilities; or at

least cope with the possible outcomes of hostile actions. The mission is, predictably, a major consideration in any threat assessment. Mission analysis will not only help identify potential enemies but also influence defensive planning. The political objectives of our presence in country "x," for instance, will probably preclude creation of "fortress America." Should this be the case, then security planning will have to be more imaginative and the results, less apparent.

Knowledge of the culture in which you are operating is essential to all force protection elements (OPSEC, physical security and personal protection). First is the question of normalcy. The enemy strives to cloak his actions by appearing normal and unworthy of attention. We have to know what is "normal," if we are to detect that which is abnormal. More important, since virtually all military missions have psychological aspects, we must understand the culture if we are to evaluate the effects of our own and the enemies' actions on various segments of the population.

Although writing some 250 years ago, Frederick II (The Great) of Prussia voiced the credo of force protection when he told his generals, "Skepticism is the mother of security." His advice is particularly appropriate in contemporary threat analysis. If there is no identifiable threat, hypothesize one to exercise the organizational response. In the context of force protection, thinking like the enemy can be quite simple. "If I were a profit-oriented criminal, what would I be interested in? If I wished to sabotage the facility or unit operations, what would my targets be? If I were a terrorist, what actions would contribute most to my objective?" Underlying the "what if" exercise is the assumption that the enemy wishes to gain his objective with minimum risk to himself. We should note that suicide actions are done to enhance the effect of the attack (demonstrate a willingness to die for the cause) or because the perpetrator sees no alternative. Despite being an effective psychological operation, suicidal action is not popular in any culture, although it is more acceptable in some than in others and must never be ignored.

The reason the "what it" must be played from the viewpoint of all possible threat categories is that the probable targets will vary according to the perpetrators' objectives. Hindering operations is one thing, eroding morale is another and gaining maximum attention in the sensation–rich environment of late 20th century America is something quite different. Target selection to support the three motives might go something like this: to hinder (destroy petroleum, oils and lubricants storage, or communications centers); to erode morale (kill sentries or off-duty and out-of-the-cantonment personnel);

and to capture attention (attack a medical facility or kill the commander).

While a discussion of OPSEC and physical security is well beyond the scope of this work, it may be helpful to review a few principles in the force protection context. OPSEC is essentially the process of determining what information about you will be beneficial to an enemy, then identifying what actions can provide the enemy that information and, finally, taking steps to deprive the enemy of that information. OPSEC is conceptually simple but sometimes difficult to accomplish although nearly always inexpensive in human and material resources. Like all aspects of force protection, OPSEC is simply military logic applied to security, thus it should be a routine consideration in planning and operations with more or less emphasis as the particular situation dictates.

Physical security is even more inglorious than personal protection and OPSEC, if that is possible. Physical security is generally considered to be exclusively within the purview of an obscure member of the provost marshal's garrison staff. When deployed, perhaps the engineer becomes the principal actor. Ideally, the force protection program would routinely bring together the skills of operations, intelligence, engineer, provost marshal and any other staff functions that the situation might require to plan and execute physical security measures. Here again, the prudent commander will not rely exclusively on the known threat to guide the efforts since the array of enemies can change tactics, as well as acquire different weaponry in days as compared to the multivear acquisition cycles for the US Armed Forces.

Physical security must not be considered as being analogous to creating a 14th century keep; there is more to it, even if vast resources are not necessarily involved. Recognizing that consideration of security in the structural design of a building or facility is the ideal, it is also a rare opportunity. The more common situation is to "make do" with the existing physical infrastructure. Factors in physical security planning range from an initial terrain analysis; through establishment of access controls; to needs for screening from visual surveillance or ballistic protection; to the size, competence and rules of engagement of the response force. In some cases, rather than trying to harden all targets, it might be desirable and more economical to structure the defensive effort so as to encourage the attackers to move through specific areas where security forces can apprehend and neutralize them. Regardless of the variations, it is clear that the task goes beyond the responsibilities of any single special staff agency.

Sun Tzu said, "You can be sure of succeeding in

your attacks if you attack places which are not defended." The other side of this ancient military truism is to deny the criminal or terrorist enemy any undefended objectives, which, in essence, is the function of the force protection planner. Success in this requires sharpening deductive skills (information about criminals or terrorists is virtually never exact or complete), developing a respect for the enemies' capabilities and inculcating security awareness in the Total Force.

Force Protection Planning. The commander of the Combined Arms Command, Fort Leavenworth, Kansas, is the Army specified proponent for combatting terrorism. The military police and intelligence schools, along with the John E Kennedy Special Warfare Center, Fort Bragg, North Carolina, are subproponents for installation security, intelligence and personal protection, respectively. There are several functional courses available to help commanders prepare to meet their force protection responsibilities:

• Combatting Terrorism on Military Installations and Bases, US Army Military Police School, Fort McClellan, Alabama. This one—week course is designed to prepare operations and security staff personnel to develop antiterrorism plans and programs for installations or units.

• Intelligence in Combatting Terrorism, US Army Intelligence Center and School, Fort Huachuca, Arizona. A two-week course designed to prepare staff personnel to develop the intelligence analysis portion of the threat assessment.

• Antiterrorism Instructor Qualification Course, US Army John F. Kennedy Special Warfare Center. A two—week course designed to quality selected installation and unit personnel to instruct individuals and units in personal protection.

• Operations Security, currently hosted by the Army Strategic Defense Command at Redstone Arsenal, Alabama. (The course location will probably change in Fiscal Year 1993.) This one—week course is designed to equip operations staff personnel to perform the OPSEC function for installations or units.

• Dynamics of International Terrorism, US Air Force Special Operations School, Hurlburt Field, Florida. This one—week course provides an overview of the sociopolitical phenomenon of terrorism and the principles of antiterrorism.

While the challenge for the military with reference to force protection—generally is to arouse enough interest to avoid having the activity die of neglect, there are a few cautions to temper exuberance. One is to never allow security to become a prestige factor. When security measures are based on

the importance of an installation or individual rather than need as determined by the threat assessment process, we are on the way to protecting the wrong things for the wrong reasons, which is toolish

by any measure.

As Field Marshal Hermann Maurice de Saxe observed, "In default of knowing what should be done, they [generals] do what they know." The accuracy of this behavioral comment and its applicability to people other than generals have been demonstrated throughout the ages and is palpably true in the matter of force protection. The alert, informed soldier is the best defense against the criminal or terrorist threat today, as he has been for millenniums. Security awareness is not, however, instinctive. To develop this simple but reliable defense, leaders must habituate themselves and their organizations to security by making force protection a prominent factor in educa-

tion and training activities, as well as in actual operations. MR

NOTES

Draft US Army Regulation 525–13 Army Combatting Terronsm Programdue to be published in 3d quarter Fiscal Year 1992.
 Anonymous quote by 6th–century author in Three Byzantine Military Treatises. Edited by George T. Dennis (Washington DC: Dumbarton Oaks. 1985).

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Letters

A/LV—The Next Generation

Retired Colonel Wallace P. Franz touches on what may be the most revolutionary idea in warfare in his impressive February 1992 Military Review article, "Airmechanization, the Next Generation." Airmechanization is one of those intellectual rarities—an idea that makes perfect sense on its face.

Franz accurately notes that the Gulf War showed again the difficulty in properly transporting the Armed Forces across the ocean to the theater. We were lucky Saddam Hussein did not think the United States would fight, or the lightly armed air cavalry units that arrived first would have come under heavy attack in the autumn of 1990.

Armored forces showed themselves to be as potent as they have always been, and while I would not go as far as Franz in saving the AirLand Operations style doctrine of Army 21 cannot be executed with today's armored vehicles, it is nonetheless true that, as the 21st century progresses, armored forces must evolve far more radically than they have.

Franz's illustration of an air/land vehicle (A/LV), with a detachable compartment pod, demonstrates the starting point for airmechanization. He notes what A/LVs could and should be for the near future, but we should also plan to eventually go beyond the rotary-wing vehicles he illustrates and eventually develop what I would call an air/land fighting vehicle.

The concept involves an armored, jet-powered, vertical takeoff vehicle with built-in weaponry, primarily kinetic-energy cannons on revolving turrets, that is also capable of carrying an infantry squad. Such a weapon would not only prowl at ground level like modern armored vehicles but would also be able to take off and fly like modern helicopters. It would be capable of fighting the fluid, regiment-oriented. decentralized campaigns discussed in Army 21 and also capable of deep penetration, raid-type operations and special operations missions. It would also have a self-defense, air-engagement capability.

Granted, such a concept is perhaps a half-century from reality, but I believe it can be done and would revolutionize warfare in the most dramatic way since the actual birth of air-land battle in Poland in 1939.

Michael Daly, Wakefield, Massachussetts

General Purpose Peep

Military magazine, March 1992, page 21, reprinted an article from your July 1991 issue titled "World War II Almanac: The 50th Anniversary of the Jeep," by John Reichley. One of the questions posed was how the name "jeep" originated. Inasmuch as this is essential to our national defense, I feel I should make my contribution, if for no other reason than to prove that I am a patriotic American!

Prior to World War II (early 1941), I came into possession of a small booklet that had photos and data on all US Army vehicles. One of these vehicles was a large, car-type vehicle called the jeep. On the next page was a small, blocky-looking vehicle called the peep.

In 1948, I went to work part time as an assistant motion picture projectionist for a guy named Julian Henderson. I was in high school at the time and worked after school. Iulian had carried a BAR (Browning automatic rifle) in World War II. By the way, I did not call him "Julian"-I called him "Mister" Henderson. In any event, by then, I knew that the peep in my little book had become the jeep. so I showed him the book and asked him about it.

Julian had enlisted early in 1941, and he remembered the jeep and the peep. He said the jeep shown in my book was really a C&R (command and reconnaissance) car and that the Army "wheels" who used

it did not like the name jeep because it did not sound official. And they did not like the term peep for the little car because it made it sound like a child's toy, so they dropped jeep for the C&R car and adopted jeep for the little, stocky car. He said jeep originally came from GP for general purpose vehicle.

I have no idea if this story is true or not, but I would hesitate to doubt a man who carried a BAR all through World War II and won the Silver Star twice.

MAJ Robert T. Smith, USAF, Retired, Sacramento, California

Correction: In our February issue, we incorrectly identified the M1 Abrams tanks and M2 Bradley vehicles pictured on page 36 as belonging to the 2d Armored Division (Forward). The vehicles were actually from the 1st Brigade, 2AD, the "Tiger Brigade," attached to the 2d Marine Division.

Book Reviews

THE PAPERS OF GEORGE CATLETT MAR-SHALL, VOLUME III: "The Right Man for the Job," December 7, 1941-May 31, 1943. Edited by Larry I. Bland and Sharon Ritenour Stevens. 772 pages. The Johns Hopkins University Press, Baltimore, MD. 1991. \$45.00.

Looking back on his nation's experiences in the American Civil War, Walt Whitman wrote, "We have undoubtedly in the United States the greatest military power—an exhaustless, intelligent, brave, and reliable rank and file-in the world, any land, perhaps all lands. The problem is to organize this in the manner fully appropriate to it, to the principles of republic, and to get the best service out of it.'

That was precisely the problem facing General George C. Marshall, chief of staff of the US Army. on the day that begins this third volume of his collected papers—7 December 1941. Indeed, this was the problem with which he had contended since his very first day as chief of staff, 1 September 1939, when German forces invaded Poland and began World War II.

In the intervening time, Marshall had spent his energies overseeing the rejuvenation of the US Army that only a few years earlier had been rated by one of his predecessors as roughly equal to the army of Portugal. Marshall inherited an Army in 1939 that numbered 190,000. By 1941, the Army had expanded to nearly 400,000; upward of 100 divisions were on the drawing boards; the US industrial base

had been mobilized; and new fighting doctrines, training methods and equipment had been set in motion and tested in the Louisiana and Carolina maneuvers of 1941. High-ranking officers past their prime were being weeded out, replaced by younger officers whose names had found their way into Marshall's "little black book." And yet, Marshall would have been the first to say, on the day after the lapanese attacked Pearl Harbor, that his Army was not ready to meet its enemies on equal terms.

The United States' victory in World War II has often been cast, in retrospect, as nearly inevitable. Yet, the conclusion of this war was by no means foregone. During the period covered by this volume, Marshall was required to make numerous decisions, any one of which could have proved a deadly miscalculation. As with the first two volumes of Marshall's papers, the editors give us a close, well-informed look at the scope and volume of Marshall's concerns.

The portrait that emerges is one of a man in command of himself and his business, possessed of those qualities that made him such a valued adviser to President Franklin D. Roosevelt. A consummate military professional who had never voted because he believed officers should never meddle in politics, Marshall nevertheless had as keen an understanding of the special attributes and limitations of a democratic republic at war as any US officer since General Ulysses S. Grant. Marshall's understanding of the political dimensions of modern war enabled him to accept one of his earlier disappointments philosophically. After failing to convince the British, as well as Roosevelt himself, of the necessity for an early invasion of the European mainland, code-named

SLEDGEHAMMER, Marshall recalled:

"So we were at a complete stalemate. Churchill was rabid for [an invasion of North] Africa. Roosevelt for Africa Both were aware of political necessities. It is something we fail to take into consideration. I told the National War College students that officers lack knowledge of political factors which political leaders must keep in mind.

Even so, Marshall was no lap dog, and he was not at all reluctant to contest the judgments of the president himself. During preparations for staff talks with the British on this same question, Secretary of War Henry L. Stimson recorded in his diary that Marshall "evidently had had a thumping argument with the President" It was not to be the last.

There was every reason during the first two years of the war for Marshall, and indeed every other US military leader, to be short-tempered. There were reverses on all fronts: German submarines were torpedoing coastal shipping; the Philippines had been invaded; and Singapore had surrendered. Only toward the end of the summer of 1942 could Allied leaders take hope from the operations they had set in motion. Two successful naval encounters at Midway and in the Coral Sea were followed by landings in the Solomons. But even this moment was counterpointed by the German offensive drive on Stalingrad. Not until the end of 1942 could the most optimistic predict eventual success.

Could it be said then that during the darkest period of this war, Marshall's every thought and action bore upon the momentous questions facing him and his Army? That is far too much to ask, for Marshall's life was no better organized than anyone else's to deal with matters that, in retrospect, were constantly of the highest importance. What is most interesting is the mixture of subjects that came to Marshall's attention at any one time and the amount of attention he gave to each. For example, just as US defenders on Bataan were preparing to fall back to their final detensive line, Marshall was writing to the surgeon general on "the urgent need of ample mosquito gauze at Freetown and Takoradi on the west coast of Africa" and to General Henry H. "Hap" Arnold regarding "the introduction of aviation pilot training at West Point."

Inevitably, the more pressing business of the war shoved aside minor concerns. By March 1943, Marshall was writing to his goddaughter, "My battle has always been to keep going and conserve my energies in every possible way." A year earlier, he had written

to an old friend, "The pace of modern war has increased greatly the burdens on leaders of all ranks. Highly efficient and energetic leadership is essential to success. No compromise is possible.

How Marshall conserved his energies while providing "highly efficient and energetic leadership" should be the chief interest of any professional officer reading this volume. The first two volumes have given us an intimate look at the development of Marshall's mind and his preparations for war. Always, Marshall seemed to be thinking ahead of his place. time and contemporaries about the unique demands made by a democracy of its army. This volume allows us to watch Marshall's thinking "put in action," meeting its ultimate intellectual and physical test.

As with the first two volumes, the editors have arranged and commented upon Marshall's correspondence in such a way as to provide readers the context necessary for understanding what they read. The professional soldier encountering Marshall for the first time needs no other reference to enjoy the benefits of this volume. Military scholars will be more than satisfied by the volume's plentiful notes, chronologies, glossary and index.

Roger J. Spiller, Combat Studies Institute, USACGSC

2355 DAYS: A POW's Story by Spike Nasmyth. 264 pages. Orion Books, New York. 1991. \$20.00.

From September 1966 to February 1973, Captain John "Spike" Nasmyth-wounded, often in pain, starved and filthy-lived the crucible of a war that many Americans would rather not remember, even today. Nasmyth takes you into his world as a prisoner of war (POW) in this candid and vivid account of the ordeals of POWs in Vietnam. You read as though you are there in the cell next to his. But at the close of the book, you will be relieved to know that you were not.

This is not an antiseptic POW biography. It is graphically told, without embellishment. If you cannot take large doses of profanity, do not read this book, but you will miss one of the best accounts of a real consequence of war—the cruelty and deprivation that US soldiers lived through as POWs of North Vietnam.

Beyond Nasmyth's straightforward account of life as a POW, he has two other messages. One is that the POWs' survival was enhanced by their method of communicating with each other. As the communications officer, Nasmyth was, in essence, in charge of survival skills. Mostly pilots, the POWs developed an elaborate tapping system to send messages to adjacent cells. They organized cell blocks into squadrons. conducted language classes, told stories and passed on jokes. Nasmyth's sense of humor was a source of energy for many of the other prisoners. His natural optimism when the going got tough motivated other cell mates to hold on when they were ready to give up on life.

Nasmyth's second message is a commentary on the Code of Conduct. For him and his buddies, the code was a guide, not a set of hard and fast rules. The POWs held the spirit of the code intact, but found it no longer feasible to follow it to the letter. After being captured, each prisoner was called upon to confess his crimes against the peaceful people of North Vietnam. On Nasmyth's turn, he feels uneasy, at first, about accepting a cigarette. But, like the others, he confesses, including enough untruths to make the confession worthless, while adding enough color to make it believable. Yet, he believes he was true to the spirit of the code and did not lose sight of its limitations.

Nasmyth tells of only one attempted escape during his almost seven years in captivity. Even though it was initially successful, the two POWs were recaptured. Both were severely tortured; one survived. For Nasmyth and the other pilots, requiring escape attempts are one part of the code needing interpretation.

Nasmyth's life changed drastically—from playboy and US Air Force Reserve Officers' Training Corps student at the University of Idaho to F4 Phantom pilot, to POW. Today, he harbors no hostility toward the military and concludes that, compared with Korean War POWs, a higher percentage of captured US pilots survived during the Vietnam War because they were more mature, they had volunteered and they were career—oriented from the start. In this case, Nasmyth's sense of humor kept him, along with the many others he touched—or tapped—going.

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RECURRING LOGISTICS PROBLEMS AS I HAVE OBSERVED THEM by Carter B. Magruder. 134 pages. Center of Military History, Washington, DC. (Available from the Superintendent of Documents, US Government Printing Office, Washington, DC.) 1991. \$8.50.

A SOLDIER SUPPORTING SOLDIERS by Joseph M. Heiser Jr. 323 pages. Center of Military History, Washington, DC. (Available from the Superintendent of Documents, US Government Printing Office, Washington, DC.) 1991. \$12.00.

Those who have searched libraries with hopes of finding books about logistics know the feeling of going away with empty arms. There never has been much in print on the subject. And accounts by military leaders who either witnessed or waged logistics

in war are rarer still. Some of this may be changing in the future. The Center of Military History recently released two books to begin a series of works by distinguished US Army logisticians focusing on firsthand experiences in providing combat service support. These two books differ dramatically in focus and quality.

Recurring Logistics Problems as I Have Observed Them provides an exceptional beginning for the series even though few today will recognize the name of its author. Carter B. Magruder would have required little introduction several decades ago. He had completed nearly 20 years of commissioned service in infantry and artillery before his assignment, at the start of World War II, as the director of the planning division for Army Service Forces; he later assumed duties as the G4 (logistics officer) of the Mediterranean Theater of Operations. After the war, he became the G4 of the European Theater of Operations responsible for clearing up the logistic aftermath. His later assignments included command of the 24th Infantry Division and IX Corps in Korea before becoming deputy chief of staff for logistics (DCSLOG) of the US Army for four years starting in 1955. After that, he was promoted to full general and took command of the United Nations Command; US Forces, Korea; and Eighth Army before retiring in 1961. He finished this account in 1970, at which time, it apparently became lost in the Army's archives until after his death in 1988.

No one in the Army has ever written about logistics with anything close to Magruder's vantage point on 20th century conflict. That alone makes *Recurring Logistics Problems* a book that today's logisticians should take very seriously. Most will discover that this timeless little account of logistic problems—past, present and future—has few equals.

Eight of the nine chapters in the book focus on recurring logistic problems: supply requirements for an overseas theater of operations; troop requirements; support of contingency plans; career management of personnel; operation of the logistics system; maintenance of materiel; intertheater transportation; and production in war. The final chapter provides a summary of 31 lessons Magruder learned throughout his career in dealing with the problems identified in previous chapters.

Readers will quickly notice that some of the major problems identified here have already recurred several times in the last decade. But it is Magruder's method, as well as his message, that makes this such an important book. Following a logical discussion of each problem, he always leads the reader to two specific summary statements; reasons why a particular problem recurs and the form in which it probably will recur. In essence, his method itself becomes an

excellent example of how to use the past to provide a framework for the future.

That, after all, was Magruder's purpose in detailing some of his experiences. In his short preface, he indicates that he hoped "to help others in the solution of future logistic problems." He succeeds so well that his book, hidden for so long, now deserves to be on a lot of required reading lists. Regrettably, the same cannot be said for the second book in this series.

Many already know a little about Joseph M. Heiser either from Vietnam, where he commanded the 1st Logistical Command, or from his book, Logistics Support, concerning that war. A Soldier Supporting Soldiers is a memoir of his life and logistic experiences. Following a brief account of his upbringing, Heiser devotes about 200 pages to discussing the major phases of his military career from World War II through to his retirement in 1973, after serving as the DCSLOG. He then explains several of his postretirement logistic activities, including his extensive work and recommendations to reshape the logistic focus of NATO in the early 1980s. The book concludes with a wide-ranging discussion of the state of logistics in "today's" Army, which seldom looks beyond the 1970s; a listing of 10 logistic imperatives; appendixes with selected Heiser writings; and a bibliography of his other publications.

Heiser indicates in his preface that his intent is to outline lessons for today's logisticians, to emphasize qualities essential to military leadership and to underscore continually that the logistician's responsibility is to support combat soldiers. Noble as that may seem, the book simply does not come across that way because Heiser has difficulty detaching himself from his achievements. He pats himself on the back far too frequently, even citing from his efficiency report on one occasion; and he quotes others who supposedly also heaped praise upon him throughout his career. Rarely does a chapter go by when he does not remind the reader that he has 48 years of logistic experience, seven in combat zones in three different wars. Such comments, however intended, will turn many readers away from the important insights in this book. That is regrettable.

Today, as the Army starts the difficult process of reorienting itself toward a future made uncertain both by undefined threats and dwindling resources, this new series takes on special significance. The Army will inevitably have to do more with less in years to come—and it can hardly afford to let any experience go unnoticed. Toward that end, this series stands to be a real watershed for logisticians. It starts with mixed but, nevertheless, significant success.

LTC Kenneth L. Privratsky, USA, Hoover Institution, Stanford University, Stanford, California

HANDBOOK OF MILITARY PSYCHOLO-

GY. Edited by Reuven Gal and A. David Mangelsdorff. 780 pages. John Wiley & Sons, Inc., New York. 1991. \$200.00.

This extensive and expensive volume is a consolidation and synthesis of the literature concerning the military applications of psychology. With the exception of the relatively new *Journal of Military Psychology*, literature relating to military topics is scattered through the gamut of psychological, sociological, anthropological and other journals. This text provides a welcome starting point for research in military psychology. The reference lists at the end of each chapter are complete and recent.

"Selection, Classification and Placement in Military Services" provides a valuable historical perspective on the ways various nations have determined who should be in their military organizations and what they should do. Special research attention is paid to aviation because of the length of training required and the cost of equipment involved.

Cultural ergonomics, artificial intelligence, stress and man-machine systems are covered from a multinational perspective in the "Human Factors and Military Performance" section. The success of the US Army's latest weapon systems is attributable to the results of the research in these areas, making machines user friendly.

The section, "Environmental Factors and Military Performance," is based mainly on experiments conducted by various military research institutes. Study topics include effects of temperature, altitude, sustained operations, motion sickness, noise, atmospheric mix and toxic fumes, sustained acceleration and vibration, and radiological factors. Clearly, this is information commanders need to be aware of and consider in their planning.

In "Leadership in Military Performance," the briefest section in the volume, section editor T. O. Jacobs explains: "Rather than duplicating the excellent reviews already in existence, it ... appeared useful to focus instead on the transition the field is undergoing." It ranges from small—unit leadership (company and below) to leadership at three—and four—star levels. There is also a discussion on the differences in leadership for garrison and for battle.

The "Individual and Group Behavior" section should be of interest to military leaders at all levels. The variety of topics include morale, cohesion and esprit de corps; cultural and societal factors; individual and group behavior in extreme situations; combat stress reactions; noncombat stress; and personality factors. The chapter on noncombat stress, an area often overlooked, points out the effects of such things as substance abuse, child and spouse abuse,

antisocial behavior and racial problems.

Clinicians and nonclinicians will find the "Clinical and Consultative/Organizational Psychology" section interesting. For the line soldiers, the chapters on substance abuse and wellness provide insights into what is known in the civilian world as employee assistance programs—probably some of the largest programs in the Western world. The mental health worker will find the other sections professionally rewarding, especially "Consultation in a Military Setting."

The aptly named last section, "Special Subjects and Special Situations," covers the "current events" and hot topics of military psychology. Included are propaganda and active measures, hostage negotiations, women's role in the military and prisoners of war.

A wide scope of topics is covered in an excellent manner. The editors have obtained some of the key individuals in their fields as chapter authors and section editors with outstanding results in a difficult task.

This work is a must for any behavioral science reference library and an extremely valuable addition to any military library. The former should include this book for its wealth of information on the history and current state of military psychology research and the latter, for its information on such topics as leadership, cohesion, combat and noncombat stress, women's roles and environmental factors.

LTC John D. Richards, USA, Behavioral Science Division, Academy of Health Sciences, Fort Sam Houston, Texas

THE PLACE OF MORALITY IN FOREIGN

POLICY by Felix E. Oppenheim. 112 pages. Lexington Books, Lexington, MA. 1991. \$27.95 clothbound. \$14.95 paperback.

A wide spectrum of recent political-military activities, ranging from the Iran-Contra scandal to Operation *Desert Storm*, has found military officers in

the often difficult position of moral arbiter. Accordingly, if current events serve as an indicator of the future, it makes sense for military professionals to study Professor Felix E. Oppenheim's new book, The Place of Morality in Foreign Policy.

Oppenheim addresses the significant question, "When is it relevant to judge foreign policies as moral or immoral, and when are such judgments either redundant or counterproductive?" Drawing upon a number of examples from contemporary US foreign policy, Oppenheim argues that there are objective criteria by which to answer this question, regardless of where one stands morally or politically. These criteria involve the concepts both of rationality and national interest. Using these criteria, Oppenheim notes that certain areas of foreign policy fall outside the range of moral relevance, including specific goals such as protecting territorial integrity, military security and economic welfare.

Nonetheless, he does believe there is a place for morality in foreign policy. When moral considerations relevant to foreign policy goals are clearly compatible with national interests (for example, to cooperate with other countries in combating international terrorism or drug trafficking) and when there is a choice between several foreign policies conducive to the national interest, we ought to select the one that is morally superior.

While this book is generally a strong piece of scholarship, particularly when defining such basic concepts as rationality and national interest, it does have some shortcomings. Perhaps the most notable is in its chapter on morality and war, where Oppenheim fails to adequately delineate the conditions under which military actions can be considered justified. This criticism notwithstanding, Oppenheim's work is an excellent primer for those interested in the vital area of morality and foreign policy.

MAJ John D. Becker, USA, United States Military Academy, West Point, New York

USAF Academy 15th Military History Symposium

The US Air Force Academy will hold the 15th Military History Symposium, "A Revolutionary War: Korea and the Transformation of the Post–War World," 14–16 October 1992. For further information contact: Captain T. N. Castle, HQ USAFA/DFH, USAF Academy. CO 80840–5701 or call (719) 472–3230.

Military Review Writing Contest Reminder

Entries for the 1992 Military Review writing contest will be accepted through 1 July 1992. This year's topic for entries is "The US Army in Joint, Combined and Coalition Warrare." The author of the winning manuscript will receive \$500; the award for second place is \$200; third place is \$100. The winning manuscripts will be published in Military Review in the fall of 1992. Confine your essays to between 2,000 and 2,500 words and ensure they are original manuscripts not previously offered elsewhere for publication. Send your entry to Military Review, US Army Command and General Staff College, Funston Hall, Fort Leavenworth, KS 60027–6910.

New Hall of Fame HONOREES

Every year the Fort Leavenworth Memorial Hall of Fame Association selects, for induction into its Hall of Fame, individuals whose performance of duty accomplishments warrant recognition and emulation. The Command and General Staff College, Fort Leavenworth. Kansas, and its predecessors have been instrumental in developing Army leadership for 111 years. Since 1970, outstanding persons who have been associated with the college have been memorialized in Bell Hall at Fort Leavenworth. This year's inductees are General Jacob Loucks Devers, Lieutenant General Samuel Baldwin Marks Young and General William E. Depuy.

Devers, who is best remembered for his command of the 6th Army Group in Europe during World War II, was a 1909 graduate of the US Military Academy. After a 35-year career, Devers was given a combat command in July 1944—the 6th Army Group. His 12 American and 11 French divisions cleared Alsace, reduced the Colmar pocket, crossed the Rhine and accepted the surrender of German forces in western Austria on 6 May 1945. Though not as flamboyant as some of his contemporaries. Devers was highly competent

and the consummate professional.

Young holds the distinction of being both the last commanding general and the first chief of staff of the US Army. Enlisting as a private in a company of Pennsylvania volunteers right after the first shots were fired on Fort Sumter, South Carolina, he entered the requlars after distinguished service in the Civil War. In 1881, he was assigned as an instructor at the School of Application for Cavalry and Infantry at Fort Leavenworth. On 9 August 1903, he was promoted to lieutenant general and succeeded Nelson A. Miles as commanding general. Six days later, under the auspices of Secretary of War Elihu Root, he was made the first chief of staff.

DePuy's career was long and distinguished. He served as an infantry officer in a myriad of command and staff positions, including command of the 1st Infantry Division in Vietnam. DePuy is perhaps best remembered for his efforts as commander of the US Army Training and Doctrine Command to reorient the Army after the Vietnam experience. His wide-ranging, and sometimes controversial, changes in combat development and the way the Army trains set the US Army on the path to becoming the force that looks and fights the way it does today.

The induction ceremony this year will be held on 7 May 1992 at CGSC. The Hall of Fame Board continues to maintain its high standards in honoring Devers, Young and DePuy. Their exemplary service has greatly benefited the Army and reflected favorably on

Fort Leavenworth.

Major Robert E. Connor, US Army Combat Studies Institute, USACGSC



General Jacob L. Devers





General William E. Depuy